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ABSTRACT

Surveys of local employers were conducted by Johnson County Community College to determine the needs for potential career programs as related to job opportunities in the following areas: (1) accounting; (2) advertising and journalism; (3) animal health technology; (4) automotive technology; (5) building construction; (6) child care for preschoolers; (7) dental laboratory technology; (8) equine management; (9) fire protection and public safety technology; (10) medical laboratory technology; (11) medical records technology; (12) mental health technology; (13) physical therapist assistants; (14) press operators; (15) radiologic technicians; and (16) urban agribusiness. Results of these surveys are presented in 16 distinct reports which consider the national employment outlook, local manpower needs, salary potentials, relevance of an associate degree in qualifying for positions, and other job qualifications. Some reports also discuss existing job training opportunities and their impact on employment needs; program options and costs; staff and site selection considerations; and student interest and recruitment. Many reports include references. (HB)

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ED165863

AN EXAMINATION OF POTENTIAL CAREER PROGRAMS

SPECIAL REPORTS ON:

Accounting
Advertising and Journalism
Animal Health Technology
Automotive Technology
Building Construction

Child Care for Preschoolers
Dental Laboratory Technology
Equine Management
Fire Protection and Public Safety Technology
Medical Laboratory Technology

Medical Records Technology
Mental Health Technology
Physical Therapist Assistants
Press Operators
Radiologic Technicians
Urban Agribusiness

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JC 790 138

June, 1978

Office of Institutional Research
Johnson County Community College
College Boulevard at Quivira Road
Overland Park, Kansas 66210

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AREA EMPLOYMENT OUTLOOK IN ACCOUNTING

I. INTRODUCTION

JCCC has offered accounting as a program of study since the College opened in 1969. The curriculum has been designed so that students can obtain preparation either for entering the job market after two years of study or for transfer to a four year college. Prior to this year, however, JCCC had not sought approval from the Kansas State Department of Education to classify the accounting program as a vocational program.

During the last few years there has been a growing awareness by the College staff that there was a need for a vocational accounting program. Before moving forward, however, some examination of the area employment possibilities in accounting was necessary.

National Employment Outlook for Accountants

The Occupational Outlook Handbook in Brief (1976-77) published by the Bureau of Labor Statistics gives the following outlook for accountants:

> Very good opportunities. Because of growing complexity of business accounting requirements, college graduates, particularly those who worked part time for an accounting firm while in school, will be in greater demand than nongraduates. Employers also prefer applicants trained in computer techniques.

Employment in 1974 was 805,000 and 45,500 jobs are expected to become open annually between 1974 and 1985.

Forbes magazine (September 1, 1977) also projects a burgeoning market for accountants (especially Certified Public Accountants). It should be noted, however, that according to the Forbes article "This year U.S. universities and colleges will award some 44,100 undergraduate and 5,500 graduate degrees in accounting. This is more than double the accounting diplomas

awarded in 1970." It also exceeds the United States Bureau of Labor Statistics' projection of annual openings for accountants.

National Employment Outlook for Related Occupations

According to the Occupational Outlook Handbook in Brief (1976-1977), there were 1,700,000 bookkeeping workers in 1974 and an estimated 121,000 annual openings between 1974 and 1985 for such workers. The employment outlook for bookkeeping workers is as follows:

> Employment expected to increase at slower rate than average for all occupations because of increasing automation in recordkeeping. Most job openings will result from replacement needs.

In 1974 there were 270,000 bank tellers and an estimated 30,000 annual openings between 1974 and 1985. The employment trends and prospects are cited below:

> Good employment opportunities due to large replacement needs and faster than average employment growth as banking services expand. Many openings will arise for part-time tellers to work during peak business hours.

II. SURVEY OF LOCAL NEEDS

In order to assess local needs in the accounting field a survey was designed by the Office of Institutional Research and administered via telephone to potential employers of graduates. A random sample of approximately one-fourth of the accounting firms (both CPA and public), banks and savings and loan companies within Johnson County was contacted. In addition, large area department stores were contacted and three large Kansas City, Missouri CPA firms were consulted.

Each of the firms surveyed was asked about employment prospects for bookkeepers, accounting clerks, and junior accountants. Banks and savings and loan companies were also asked about tellers. For each occupation the interviewer asked how many persons were currently employed in that position,

how many unfilled vacancies they had, how many positions the company anticipated adding within the next one to two years, the approximate starting salary, level of education required and whether a two-year degree in accounting would help an applicant obtain the job. The interviewer also asked whether there were other jobs in the firm which would be appropriate for persons with a two-year degree in accounting. The interview was ended by asking the respondent for any comments or suggestions concerning the program or employment prospects for graduates. The program was described to all interviewees as one involving 21-24 hours of accounting plus a variety of business courses such as business law and economics. The interviewer also had the course listing available to provide more detailed descriptions when needed.

Jobs with Accounting Firms

Twenty Johnson County accounting firms were contacted. Eleven firms employed 20 persons classified as bookkeepers (19 full-time and one part-time). One firm had a current vacancy and seven anticipated adding a total of 8 positions within the next year. Eight of the 11 firms required a high school education or less to qualify for the position; two required a high school education plus a basic accounting or bookkeeping course; and one preferred a person with experience. All eleven employers said that a two-year accounting degree would help an applicant get the job. Starting salaries for bookkeepers ranged from $2.40 per hour to $5.50 per hour.

Six of the 20 accounting firms employed accounting clerks. There were 10 full-time clerk positions and one part-time. One company had a part-time vacancy and three anticipated adding a total of four positions within the next year or two. None of the firms required more than a high school education, but three required experience and one wanted applicants to have two

accounting courses. Five of the six said that a two-year accounting degree would help an applicant get the job. Starting salaries for the clerk position ranged from $2.50 per hour to $5.00 per hour.

Nine firms employed junior accountants. They had a total of 17 such positions. None of the firms had unfilled vacancies but five anticipated expanding by one position within a year or two. Six firms required junior accountants to have at least a bachelor's degree; two preferred experienced individuals and one required high school plus some accounting. Salaries ranged from $2.50 per hour to $7.00 per hour.

Three firms had other positions which they felt would be appropriate for program graduates. Two positions were as tax preparers and one was as a data entry clerk. Salaries for all three positions were $2.50 per hour.

Jobs with Banks and Savings and Loan Companies

Thirteen banks or savings and loan companies were contacted. Eight of these firms employed a total of 29 bookkeepers (26 full-time and three part-time). There were no unfilled vacancies and only one firm anticipated future expansion in that area. None of the firms required more than a high school education. Starting salaries were primarily dependent on experience and ranged from $435 per month to $900 ($2.51 - 5.19 per hour) for someone with considerable experience. Six of the eight respondents said that a two-year accounting degree would help an applicant get a bookkeeping job.

One bank employed two accounting clerks, had no unfilled vacancies and anticipated no expansion. They required some accounting experience and the respondent felt a two-year degree would be an asset. Salary for the position was $500 to $550 per month ($2.88 - 3.17 per hour).

One company employed a junior accountant and anticipated adding another. A bachelor's degree was typically required for the position, but the respondent indicated the firm might consider a two-year graduate. Salary for the position was $1,000 per month ($5.77 per hour).

The 13 firms employed a total of 118 full-time and 13 part-time tellers. They had five full-time and one part-time vacancy and anticipated adding four new full-time positions and two part-time. None of the firms required more than a high school education. Nine indicated that a two-year accounting degree would help a person get such a job. The salary range for persons without experience ranged between $400 per month and $550 per month ($2.31 - 3.17 per hour). Two institutions would pay as high as $700 or $750 ($4.04 - 4.33 per hour) for an experienced teller.

One respondent indicated that graduates might also qualify for jobs as loan officers.

Jobs with Department Stores

Eight large Kansas City area department store operations were contacted. Six of these firms employed a total of 82 bookkeepers. They had three unfilled vacancies but did not anticipate expanding the number of positions. All the bookkeeping positions required only a high school education, although previous experience was considered an asset. Four respondents felt a two-year accounting degree would help an applicant get a bookkeeping job. The other two were uncertain. Salaries ranged from $2.35 to $4.00 per hour.

Two of the companies employed a total of approximately 80 accounting clerks. One of the companies had three unfilled vacancies and anticipated

adding three more positions. Both required a high school education plus experience and felt a two-year accounting degree would be an asset. Salaries ranged from $2.80 to $4.00 per hour.

Two companies employed junior accountants but typically promoted from within for these positions.

One company representative felt that graduates might also qualify as unit supervisors (12 positions), management trainees (30 positions) or computer operators. Another representative mentioned self audit, credit approval and general clerk senior.

Other Relevant Salary Data

The JCCC Office of Institutional Research cooperated with the Overland Park Chamber of Commerce in conducting the 1977 Wage and Salary Study for Johnson County. Accounting clerks, general bookkeepers and bank tellers were among the 109 job types included on the survey conducted June 1977. Completed surveys were obtained from 61 companies. Salaries were reported independently of experience. However, the data obtained via telephone specifically for assessing accounting salaries are consistent with the data collected earlier in June. The pertinent data are summarized below.

There were 27 employers who hired 146 accounting clerks and paid salaries ranging from $376 to $1125 per month ($2.17 - 6.49 per hour). The median salary was $712 per month ($4.10 per hour).

Twenty employers other than banks hired 53 general bookkeepers and paid salaries ranging from $476 to $1400 per month ($2.75 - 8.08 per hour). The median salary was $775 per month ($4.47 per hour).

Nine banking institutions hired 25 bookkeepers and paid salaries ranging from $426 to $650 per month ($2.46 - 3.75 per hour). The median salary was $531 per month ($3.06 per hour).

Seven banking institutions employed 14 teller trainees and paid salaries ranging from $376 to $500 per month ($2.17 - 2.88 per hour). The median salary was $471 per month ($2.72 per hour).

Salaries for nine new account clerks at six banking institutions ranged from $426 to $850 per month ($2.46 - 4.90 per hour). The median salary was $588 per month ($3.39 per hour).

III. DISCUSSION

Since the accounting firms, banks and savings and loan companies contacted represented approximately one-fourth of the total of such companies in Johnson County, there should be approximately four times as many jobs available with such companies. This would indicate that there should be approximately 36-40 openings for bookkeepers within the next year or two, 8 for accounting clerks, 24 for junior accountants, and 16-36 full-time openings for tellers. Although this would imply a healthy job market with these types of companies in Johnson County, there are difficulties. The bookkeeping, accounting clerk and teller positions typically require only a high school education and the salaries are consequently low. The junior accountant positions offer higher salaries but are usually offered to applicants with bachelor's degrees. Similar problems seem to exist in the large department store operations also.

To assess the possibilities of placing graduates with larger accounting firms, personnel directors at three of the largest Kansas City CPA firms were contacted and asked if they would employ graduates from a program such as that at JCCC. One director indicated that the firm would consider doing so if the graduates could qualify to sit for the CPA examination. Kansas requires that

such a person have a bachelor's degree. However, Missouri requirements state that a person should have a bachelor's degree involving 24 hours of accounting courses (6 of which can be business law) or qualifications considered equivalent by the Board of Accountancy. If the accounting coordinator could have the JCCC program "considered equivalent," it would considerably enhance the position of the program's graduates. Otherwise, they may be over-or under-qualified for most available positions.

The majority of firms contacted in this telephone survey, however, did indicate that a two-year accounting degree would help an applicant get a job. There is no guarantee that a job applicant with a two-year college degree would receive a higher salary than an applicant with only a high school diploma. When employers become aware of the advantages to them of hiring applicants with education beyond high school, though, such applicants might enter at a higher salary.

The instructional staff will need to work closely with businesses so that graduates of the program have the skills that employers are seeking. The situation for accounting positions may be similar to that for clerical positions. A study (1974) conducted by the Office of Institutional Research to ascertain employer needs for clerical staff showed that there was a need for a short-term secretarial program in addition to the two-year program emphasizing preparation to become a Certified Professional Secretary (CPS). Most employers interviewed in that study were unaware of the rank and skills possessed by a CPS. Although 59% of the employers responded they would not offer a higher salary to a person with a CPS rank, 29% would pay more and 12% did not know. Experience was considered by the majority of employers to be a very important factor in employee selection.

The accounting program includes a course entitled Federal Income Taxes. That course alone could help a person obtain employment at a place like H. & R. Block. The definition of "leaves the program with marketable skills" may become exceedingly important for career follow-ups. Not only will there be students who will be able to obtain employment prior to graduation, but there will be other persons seeking skill upgrading. The data processing program currently has many students who are seeking training for job advancement. The 1976 Handbook for Vocational and Technical Education Planners (K-MUST) prepared by the Kansas State Department of Education states, for example, that 66% of the 20,520 employed bookkeepers need their skills upgraded but only 175 received training. The Handbook states "Perhaps the most seriously neglected area in the field of vocational education is the training of those individuals in the labor force who need to improve their present skills in the light of advancing technology and changing economic conditions." Serious thought should be given to making provision in the program for employed persons who seek skill upgrading and job advancement.

IV. SUMMARY

In conclusion, there is a need for persons in accounting related jobs. However, entry level salaries are currently low and a large number of jobs require only a high school education. Employers have indicated that a two-year accounting degree will help an applicant secure a job. Perhaps salaries will become more attractive when employers realize the benefits of a two-year accounting degree. Meanwhile, the JCCC instructional staff will need to work closely with businesses so that program graduates will have the necessary skills.

Should employers place great emphasis on a baccalaureate degree, some JCCC accounting program graduates may seek additional training. It should be remembered that two year career program graduates who transfer to four-year institutions, or who do not enter the job market immediately, lower the placement rate for their program.

Finally, there should be some stress on providing opportunities for currently employed persons to upgrade their skills. A large number of employed persons have only a high school education, so there should be many people who could benefit from additional training.

Office of Institutional Research

September 19, 1977

AREA EMPLOYMENT OUTLOOK IN ADVERTISING AND JOURNALISM

I. INTRODUCTION

The Journalism program at JCCC has been a dual track curriculum providing skills for placement in local news media and advertising or for transfer to a four-year college. There are seven courses in journalism and advertising, which give a total of 21 credit hours. Thus, journalism students have usually taken a large number of elective courses.

A two-year program with fewer electives and focusing more heavily on advertising likely would provide a stronger background for students seeking employment immediately after graduation from JCCC. Such a program probably would meet the Kansas State Department of Education criteria for approval as a vocational program.

National Employment Outlook

The Occupational Outlook Handbook in Brief for 1976-77 gives the following outlook for advertising workers:

> Employment expected to increase about as fast as average for all occupations as the growing number of consumer goods and expanding competition in many product and service markets cause advertising expenditures to rise. Favorable opportunities for highly qualified applicants; keen competition for others.

There were 170,000 advertising workers in 1974 and there should be 7,100 openings each year until 1985.

There were 40,000 newspaper reporters in 1974 and 2,200 annual openings are anticipated through the year 1985. The national employment outlook for newspaper reporters is cited below:

> Favorable opportunities for those with exceptional writing talent and ability to handle highly specialized scientific and technical subjects. Best prospects on weekly or daily newspapers in small towns and suburban areas.

II. SURVEY OF LOCAL NEEDS

In order to assess local needs in the advertising/journalism field, the Office of Institutional Research administered a survey via telephone to potential employers of graduates. A random sample of approximately one-half of the advertising firms within Johnson County was contacted. The interviewer also contacted five large Kansas City, Missouri advertising agencies, ten large local retail operations, three newspapers/publishers, and a directory company.

Each of the firms surveyed was asked about employment prospects for advertising trainees. The interviewer asked how many persons were currently employed in that type of position, how many unfilled vacancies existed, how many positions the company anticipated adding within the next one to two years, the approximate starting salary, and the level of education required. The interviewer then gave a brief description of the program and asked the respondent whether a two-year degree in such a program would help an applicant obtain the job and whether there were other jobs in the firm which would be appropriate for persons with such a degree. The interview was ended by asking the respondent for any comments or suggestions concerning the program or employment prospects for graduates.

Jobs with Johnson County Advertising Firms

Thirteen Johnson County advertising firms were contacted. Only one employed an advertising trainee. The firm had one such position, no unfilled vacancy, and was unsure about expanding the number of positions. The position had no formal education requirement. Applicants were judged primarily on the basis of their portfolios. The respondent did, however,

feel that a degree in JCCC's program would help an applicant get the job. Salary for the position was $8,000 to $9,000 per year. One employer who did not currently staff a trainee-type position would be willing to employ one for $12,000 if the person possessed the "right specialized skills" and could write well. The employer did not think completion of the program would necessarily enhance an applicant's position.

Three firms had other positions for which program graduates might qualify. One company employed one media buyer and anticipated adding another in the next year or two. The job paid $7,200 per year and required no formal training. Another firm had two positions in layout/paste-up, one of which was vacant. The salary for the position was $8,400. The third company employed three copywriters and four junior research administrators. They had an unfilled vacancy in the research area and anticipated adding at least one additional position in each area. The copywriting positions, however, required 5 years of experience with salary dependent on experience. The junior research administrator position required some college and experience and paid $10,000 to $12,000 per year.

Jobs with Large Kansas City Advertising Agencies

Five of the largest advertising agencies in Kansas City were contacted. Four of the five employed a total of between 37 and 47 persons in advertising trainee-type positions. None of the companies had unfilled vacancies, but they anticipated adding eight positions and the company that currently had no such position anticipated adding one. All companies but the latter, however, typically hired persons with bachelor's or master's degrees. Four of the employers said they might consider a two-year graduate with a particularly good portfolio. Salaries for the positions ranged from $7,200 to $10,000 per year.

Four companies had other positions for which graduates might qualify. There were 27 such positions and a possibility of three to four being added within a year or two. Salaries ranged from $7,200 to $12,000 per year. The respondents felt that a program would possibly help applicants get the jobs.

Jobs with Large Retail Operations

Eight large department stores, one large retail automotive/hardware supply chain, and a local specialty wholesaler/distributor were also contacted. Three of these companies employed advertising trainees. They currently had four such positions filled and two unfilled. Two companies anticipated adding a position within a year or two. None of the companies had specific educational requirements, but two indicated that most of their current employees had bachelor's degrees. One employer said a two-year degree would not help applicants get the job; the other two were uncertain. Salaries for the positions ranged from $6,240 to $9,500 per year.

Seven of the ten firms had other jobs for which graduates might qualify. There were 18 full-time positions and one part-time position mentioned (e.g., copywriters or layout specialists). None of the companies had unfilled vacancies, but three anticipated adding a position within a year or two. None of the positions required more education than "some college," but four employers preferred applicants with experience and one trained people from their retail outlets for the jobs. Salaries ranged from $6,240 to between $10,000 and $13,000 per year.

Jobs with Newspapers, Publishers and Directory Service

One large newspaper, a small newspaper, a publisher, and a directory service were contacted. All these firms indicated that they had potential jobs

but that they were either sales positions or jobs which require a high degree of specialization.

III. DISCUSSION AND SUMMARY

Projections based on the data obtained from this survey indicate the possibilities of a rather tight job market for graduates of a two-year program in advertising/journalism. Johnson County advertising firms could be anticipated to produce at most six to ten appropriate openings per year. Large Kansas City advertising firms offer more employment prospects but typically employ persons with bachelor's or master's degrees. They did have some jobs, which they felt would be appropriate for graduates of a two-year program. Comments from most of these firms, though, indicated that they currently had a large number of applicants. One respondent's firm usually receives 10 to 15 inquiries per week during May and June. Another said the firm averaged three calls per week. Area department stores had two unfilled vacancies and anticipated adding another five positions, but most preferred experienced applicants.

Moreover, survey responses indicate that the Kansas City job market in advertising/journalism may be quite similar to the national market. There are a number of positions available and most companies anticipate continued expansion, but there also appears to be considerable competition for available jobs.

The Kansas City market receives a large number of graduates from established programs at the University of Kansas and the University of Missouri. Thus, competition is likely to be keen. Many employers indicated that two-year graduates would have a better chance for jobs if they could develop quality portfolios and/or show aptitude for a particular specialty. One respondent even suggested that a program concentrating solely on writing

skills could gain acceptance. A communications program emphasizing the achievement of competence in speaking and writing could provide a background for a large number of positions (e.g., sales) either directly or indirectly related to advertising and journalism.

Curriculum for the proposed program should stress job placement and specialized skills rather than preparation for transfer to a four-year college. Otherwise, the placement rate for students who graduate or leave with marketable skills may drop below the level required for a vocational program.

Office of Institutional Research

September 19, 1977

JOB SURVEY FOR ANIMAL HEALTH TECHNICIANS

JOHNSON COUNTY

Johnson County Community College is considering the implementation of an animal health technology two-year program to be affiliated with Maple Woods Community College. Selection into the program would be competitive and the number of JCCC students would be initially limited to two per class.

The field of animal health technology is relatively new and does not appear in the Occupational Outlook Handbook (1976-77). Nevertheless, the Handbook does foresee favorable employment prospects for veterinarians due in part to growth in the pet population. As a veterinarian's practice expands, there could be a need for a technician to work with the veterinarian. To determine prospects for technicians within Johnson County, the Office of Institutional Research contacted 17 local veterinary clinics and hospitals and one veterinary laboratory/drug company by telephone. Respondents were asked how many technicians they currently employed, how many unfilled vacancies they had, and whether they anticipated any future openings. Information was also sought concerning starting salaries and qualifications required of technicians.

Employment Prospects

Twelve of the 17 veterinarians' offices contacted employed technicians. They employed 15 full-time and three part-time. There were six unfilled vacancies currently, and eight veterinarians anticipated adding an additional technician if their volume continued to increase. The laboratory employed one technician and anticipated two additional openings within two years. It also employed eight animal caretakers.

It should be pointed out, however, that most of the technicians currently employed were trained on the job. Many were also required to perform other duties (e.g., receptionist, cleaning cages).

Qualifications

All the veterinarians felt that a two year program could adequatley qualify technicians. Most, however, stressed that the technician must also be personable and able to work effectively with clients. Three veterinarians who had employed students from technician programs expressed concern that the students wanted to work only with the animals and were not interested in other aspects of the work.

Salary

The average technician's starting salary paid by veterinarians in Johnson County was approximately $500 per month, but ranged from $433 to $650.

Suggestions

The job market for animal health technicians in Johnson County appears to be limited but definitely sufficient to support the proposed cooperative program with Maple Woods. Students who enter the program, however, should be cautioned that most veterinarians in this area expect a technician to be "people oriented" and willing to perform a variety of mundane tasks in addition to providing technical assistance.

Office of Institutional Research

July 19, 1977

OUTLOOK FOR AUTOMOTIVE TECHNOLOGY IN METROPOLITAN KANSAS CITY

ABSTRACT

The national and local job markets for automotive technicians and related occupations appear to be favorable. There is a need for personnel at a variety of levels. Programs could be designed at different levels to prepare students for entry into the job market or transfer to four-year colleges, to upgrade the skills of employed mechanics, or to provide continuing education opportunities for those with avocational interests.

The program could be expanded to provide training in related technologies such as diesel mechanics and motorcycle mechanics which also have favorable employment prospects.

The addition of an automotive technology program could also strengthen existing programs (e.g., electronics, or drafting) by giving students the opportunity to gain specialized training in the automotive field. Students in automotive technology could likewise benefit from exposure to courses in other programs (e.g., electronics, business, management, social science or humanities).

The cost of starting an automotive technology program would be relatively high. However, initial costs should be offset by the benefits to the college and community of a program training capable mechanics who combine high standards of technical skills with a strong "service" orientation.

Office of Institutional Research
October 11, 1977

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OUTLOOK FOR AUTOMOTIVE TECHNOLOGY IN METROPOLITAN KANSAS CITY

I. INTRODUCTION

Johnson County Community College is exploring the feasibility of a vocational program in automotive technology. Since the program is currently in the formative stages, information is needed for planning purposes. The Office of Institutional Research was asked to investigate the local job market for automotive technicians and to provide some ideas for the program.

To obtain employment information, a member of the Research staff conducted telephone interviews with a sample of potential employers in Johnson County. These employers were asked to provide information concerning the number of mechanics they employed, the number of vacancies they had, typical turnover rates, and salaries.

Suggestions about possible program emphases and options were generated from impressions obtained in conversations with the employers, persons involved in local training programs, and an official of the United Auto Workers. These conversations were often extensive and the questions asked were primarily open-ended.

Employment Prospects

According to the United States Bureau of Labor Statistics, (Occupational Outlook Handbook, 1976-77 Edition, p. 396):

> Job opportunities for automobile mechanics will be plentiful in the years ahead. Because this is one of the largest blue-collar occupations, replacement needs are high. Thus, in addition to openings that will be created by employment growth, thousands of jobs will arise each year due to the need to replace experienced mechanics who retire, die or change jobs.

The Bureau estimates that 735,000 people were employed as automobile mechanics in 1974 and that an average of 24,400 positions would become open each year between 1974 and 1985.

Both the Metropolitan Kansas City and Johnson County job markets also appear healthy. In the want ads section of the Kansas City Star newspaper for October 2, 1977, there were 31 jobs listed for automobile and truck mechanics or related technicians.

Fifteen potential employers in Johnson County were contacted. The sample included two service stations, four service centers at retail stores, one service garage, and eight new car dealerships. Those contacted employed 128 mechanics and five employers had a total of seven vacancies. Turnover rates ranged from less than one position per year to four or more. Several employers indicated that they could always use a mechanic who did quality work.

Salaries are generally good. The lowest salary paid by the employers contacted was $3.50 per hour. Most paid considerably higher. New car dealers, for example, paid a union scale $5.51 per flat rate hour. This will soon be raised to approximately $6.00 per flat rate hour under a new agreement. On this flat rate scale, good mechanics can earn up to $9.00 per hour or more. All employers required mechanics to furnish their own hand tools.

Local Training Opportunities

Although there appears to be a good market for mechanics in the Kansas City area, there are also a number of training opportunities. One community college and four vocational/technical schools currently offer training in automotive mechanics. In addition the large domestic automobile manufacturers offer local training for upgrading mechanics' skills in servicing their cars.

Many local high schools also offer some training in automotive technology and some companies provide apprenticeship-type programs whereby a person learns on-the-job by helping a mechanic and performing simple tasks.

II. POSSIBLE PROGRAM OPTIONS

Although there are several automotive technology programs in the Kansas City area, Johnson County has no comprehensive program. The major automobile manufacturers have training facilities, but do not train people for entry into the job market. Their programs are designed primarily for giving specialized training to working mechanics. Thus, it would appear that a successful program could be implemented at JCCC. Prior to a decision on implementing a program, a number of options should be explored.

Traditional Program

Longview Community College currently offers a program in automotive technology. That program has a good record in graduate placement and high student interest. A similar program at JCCC could probably expect to meet with success. Such a program would involve adding 30-35 hours of automotive technology courses to the curriculum. Remaining coursework requirements could be met through current offerings in related areas (e.g., electronics, business).

Such a program would probably attract students seeking job placement skills. It would also likely attract a fairly high percentage of students preparing for transfer to a four-year college. Pittsburg State University currently has an automotive technology program that is ranked among the best in the country. If a close articulation agreement could be reached with the Pittsburg program, graduates would have the option of continuing their education rather than entering the job market immediately.

Of course, this would tend to lower the placement ratio for graduates of the program.

A Multi-Option Automotive Technology Program

Although a traditional automotive technology program at JCCC would likely succeed, a non-traditional approach possibly could produce an even more successful program. There are a number of levels within the automotive technology field requiring differing levels and types of skills. Many entry level jobs (e.g., tire buster, lubrication specialist) require only minimal training whereas others (e.g., service managers, area service representatives) require extensive training. In addition, about one out of seven mechanics is self-employed. The constantly changing technology in the automotive industry creates a need for even highly skilled mechanics to seek additional training. A number of employers contacted in the market survey indicated that they had provisions for their mechanics to receive compensation while upgrading their skills.

Such diversified needs could best be met by a program designed to provide easy access at every point. This could be accomplished by offering courses in a series during the semester rather than concurrently as in the traditional college curriculum. This type of scheduling would offer several advantages. Students would be able to concentrate on one specific topic at a time. Those seeking lower level entry jobs could gain the necessary skills in less than a semester of schooling as could those seeking to upgrade their skills in a particular area. Furthermore, such scheduling would open the possibility of contracting for some of the instruction with other local training facilities which offer similar intensive instruction (e.g., General Motors, A-C Delco).

The consensus of the employers and service representatives who were contacted was that a curriculum based on intensive units would be easier to master. Likewise, employers are accustomed to granting employees leave time to participate in such programs because the employee can learn enough in a short period of time to make a more immediate contribution. Serial scheduling would also readily accommodate a unit mastery system of instruction whereby students could progress at their own speed.

The unit mastery system of instruction for automotive technology could also help experienced mechanics obtain the necessary level of competence to pass certification as a mechanic. In 1970, the National Automobile Dealers Association and four automobile manufacturers formed the National Institute for Automotive Service Excellence (NIASE). Educational Testing Service was hired by NIASE to develop written tests over eight automotive areas: engine repair, automatic transmission (light repair), manual transmission and rear axle, front end, brakes, electrical system, heating and air conditioning and engine tuneup. The tests were designed to reflect a mechanic's ability to service, diagnose and repair. A mechanic with two years work experience is certified as a general automobile mechanic if all eight areas are passed. However, certification is given individually for each test.

III. A COMPREHENSIVE PROGRAM

A persistent concern expressed by employers contacted for job market surveys is that technicians need to be able to interact effectively with customers and coworkers and to contribute to *all* phases of the company's operation. Previous needs studies (e.g., commercial artists and biomedical equipment technicians) have also shown that employers want employees to

meet high quality standards of neatness and accuracy. One employer contacted regarding automotive technology also stressed honesty. That employer indicated there would be great demand for a competent mechanic who was also honest, willing to work and able to communicate effectively with customers.

Integration Of Automotive Technology With Other Programs

The diversity of the automotive industry offers the possibility of integrating an automotive technology program with existing programs at JCCC. Students in drafting or electronics could be given options for specializing in the automotive field. Students wishing to become service representatives or managers could combine technical courses with those from marketing and management. A special program could also be developed for mechanics wishing to open their own shops. Integration with the community education program could produce special courses for persons wishing to repair their own cars. As mentioned earlier for another program option, a transfer program could also be formulated in cooperation with Pittsburg State University.

A comprehensive automotive technology program, therefore, should also include specially tailored courses from other areas in order to broaden its utility and appeal. Possible courses could include business communications, advertising, human relations, personnel management, small business accounting, business ethics, business law, and salesmanship. Modification of such courses to reflect the special needs of the automotive industry would offer two advantages. First, students in the

program would be more likely to enroll in these non-technical courses if they could see direct relevance to their career goals. Secondly, relating these typically academic courses directly to the vocational program allows for integration of the two areas and should help to provide justification for expending vocational funds to defray a portion of the salary expenses.

Other Considerations In Developing A Curriculum

It is a virtual necessity that students in automotive technology receive practical "hands-on" training. Everyone contacted about the program stressed the importance of such experiences. This on-the-job type training could be provided in two ways. Students could be placed in local service garages as interns during their last year in the program. Alternatively, the college could provide automobile repair services for staff and local residents. Students could do the repair work under supervision of the instructors. The ideal arrangement would be to combine the two experiences. Students could work at the college until they are skilled enough to be placed in an outside internship and make a contribution.

In developing the curriculum for an automotive technology program some consideration should be given to including instruction in foreign car repair. None of the persons contacted in the job market survey knew of a local program providing such training. Their consensus opinion was that graduates with some training in repair of foreign car engines would be more employable and could possibly start at a higher salary. The importance of being knowledgeable in foreign car mechanics is likely to increase since major United States manufacturers are using more imported

parts in domestic cars.

Another area which should be considered is diesel mechanics. Employment of diesel mechanics and truck mechanics is expected to increase faster than the average for all occupations (Occupational Outlook Quarterly, Spring 1976). Continued gasoline shortages could also lead to an increase in the number of cars using diesel engines. Students from rural areas of the county could also apply diesel mechanics to the repair of farm equipment.

Small engine repair also could provide good opportunities for some graduates. For example, employment of motorcycle mechanics is "expected to increase much faster than average for all occupations..." (Occupational Outlook Quarterly, Spring 1976). In addition, opportunities are also predicted to be good for boat-motor mechanics.

Cost of Starting A Program

Building a service garage to house an automotive technology program could be expected to cost as little as $12.50 per square foot for a metal building to as much as $50 per square foot for a brick type building. A 20,000 square foot structure (enough to accommodate 30-40 students according to program guides) would cost from $250,000 to $1,000,000 depending upon the building material and design. Racks cost approximately $3,000 each and the necessary service shop equipment would cost at least $70,000. Instructional equipment and motors, transmissions, etc., will also be added to the costs. It might be possible to persuade equipment manufacturers to provide discounts or donate some equipment.

Concerns

Careful thought should be given to program development in relationship to the placement required by the Kansas State Department of Education. Job openings in the technology fields can be expected to continue to increase.

A large number of positions will be available that require only one or two years of college. However, certain positions will require advanced training at a four-year college. Some students in a two-year automotive technology program will undoubtedly transfer so they can acquire the baccalaureate degree.

In addition, some students may enroll merely to learn enough to perform simple maintenance or repair on their own cars. They will be interested in some of the courses for the sake of learning rather than for the purpose of seeking employment. If the intent of JCCC is to serve the community, perhaps the stress on job placement for all vocational students should be challenged. The basic problem appears to be the differentiation between the intent of the program and the intent of the student. Students may seek training in automotive technology for a number of reasons. Attempting to make all students in a vocational program conform to the same goal fails to encourage education as a stepping stone for job advancement and as an enrichment or aid to an individual's life. Students who complete a two-year vocational program and transfer successfully to a four-year college should be considered successes. Similarly, persons who complete a two-year automotive program and are able to handle most of their own automobile maintenance should be considered successes.

ADDENDUM

AUTOMOTIVE TECHNOLOGY

This section presents additional material pertinent to the automotive technology career program. The information was obtained after completion of the earlier report presented on the previous pages.

The program will provide students with a background in basic science and technology. Emphasis will be placed on problem solving situations due to the continuing changes in motor vehicle technology. Preparation will be provided for a variety of jobs in the motor vehicle service/management field.

Employment Prospects

According to the U.S. Department of Labor and the Missouri Department of Labor and Industrial Relations, the outlook for automobile mechanics is encouraging within the Kansas City SMSA. The number employed has increased from 5,850 in 1970 to an estimated 6,420 in 1978. There are expected to be 230 job openings each year through 1985. In the Kansas City SMSA, there are also expected to be 150 openings each year for heavy equipment mechanics (including diesel mechanics).

In 1970, there were 649 Johnson County residents employed as automobile mechanics. Assume that twelve percent of the automobile mechanics within the Kansas City SMSA lived in Johnson County in 1978. On the basis of that percentage, there are 770 Johnson County residents now employed as automobile mechanics. There will also be at least 28 additional county residents employed each year as automobile mechanics from now through 1985.

Training

According to the 1978 U.S. Industrial Outlook, the National Automobile Dealers Association and the U.S. Department of Labor will be sponsoring "a new $1.3 million program to recruit and train 13,000 persons annually as apprentice automotive mechanics...a 3-year apprenticeship will consist of on-the-job training at auto dealerships together with classroom instruction at local community colleges."

The U.S. Industrial Outlook also reports that more car owners are doing their own minor car repairs. Thus, many county residents can be expected to be interested in automobile technology courses for avocational interest.

Other Studies

Cross and Valley (1974) found in a nationally reported study that 19 percent of an adult sample of 3,910 were interested in learning a technical skill such as auto mechanics, drafting or television repair. When restricted to only one choice, 5 percent were interested in technical skills.

Marson (1975) found that the majority of "hard-to-fill positions in Wisconsin were for agricultural mechanics, auto mechanics, and die makers." Comments from survey respondents also indicated a need for a sales manpower management course for automobile sales managers.

Salary

The U.S. Department of Labor in the 1978-79 Occupational Outlook Handbook reported a national average hourly earning of $7.76 in 1976. Steady employment was forecast since economic conditions do not have much effect on the automobile repair business.

The JCCC Office of Institutional Research has completed two other salary studies during the last year which included data for automotive mechanics. If the data for those two studies are combined, the lowest hourly salary paid an automotive mechanic was $3.85, the highest was $7.24 and the median was $6.03. Thus, the salary data cited earlier is representative of the salaries paid automotive mechanics in the metropolitan Kansas City area.

Program Content

A JCCC staff member previously employed as a director of an area vocational school in another state made some personal contacts with county businesses in the automotive technology field. Some additional comments and suggestions for the automotive technology programs are listed below:

- Provide a multi-option program (merchandising, technical, speciality shops, full service dealers).
- Provide training in general area because most shops do not hire specialists.
- Certification tests are useful in majority of shops.
- Provide intern or apprenticeship program.
- Provide instruction for diesel engines.
- Emphasis should be placed on diagnosis and repair.
- Engine overhaul and rebuilding are generally done in specialty shops rather than dealerships.
- A major thrust of the program should be on emission control and tune-up.
- The use of electrical-electronics devices in automotive systems will continue to increase.
- All aspects of the training program should be backed up with hands-on experience.

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Office of Institutional Research

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ALTERNATIVES FOR A BUILDING CONSTRUCTION TECHNOLOGY PROGRAM AT JCCC

ABSTRACT

The national and local job markets for construction related occupations appear to be favorable. The greatest demand will be for carpenters, construction workers, operating engineers and plumbers/pipefitters. However, some of these positions require union affiliation. Thus, opinions from building contractors concerning the role of an educational institution in training people for the positions are important in planning a program.

The needs of area building contractors in three types of programs relating to construction technology were explored by the Office of Institutional Research. There was little need for programs designed to train skilled craftsmen. This type of training is currently provided through well established apprenticeship programs. In addition, there are typically about 10 to 12 applications for each apprentice openings. The College could provide a service in this area, though, by giving students the basic training (e.g., mathematics and reading) needed to pass the test for entry into the apprenticeship program. The college could relate this training to the hearing impaired program since forthcoming legislation will likely require contractors on federal projects to employ some handicapped workers.

Most building contractors did feel there was need for a program to train entry level field technicians and supervisors, but some contractors were uncertain about the future job market for such entry

level positions. The greatest interest was for programs designed to provide in-service training in supervisory skills for field supervisors.

The latter programs could possibly be structured around training units developed by the Associated General Contractors of America. A good program would be likely to gain broad based support from the contractors and could give the College direction and impetus for later implementing a full-scale construction technology program. Such a program should involve the Business and Economics Division as well as the Engineering and Technology Division.

Office of Institutional Research

November 17, 1977

ALTERNATIVES FOR A BUILDING CONSTRUCTION TECHNOLOGY PROGRAM AT JCCC

I. INTRODUCTION

Johnson County Community College has been considering a program in building construction technology for some time. The construction industry is highly diversified and employs a wide range of persons with specialized skills, so training programs could be implemented in a variety of areas. The Office of Institutional Research, therefore, was requested to determine what types of training are needed in the area and what type of program, if any, could be successful. Three program possibilities were explored: 1) training for persons to enter the skilled trades (e.g., carpentry, masonry, etc.); 2) training for entry level "field technicians" (e.g., estimators, field supervisors, etc.); 3) in-service training to upgrade the skills of persons already employed in the construction industry.

To explore these possibilities members of the research staff conducted in-depth personal interviews with a representative of the education committee for the Heavy Constructors Association of Greater Kansas City and a training representative from the Builders' Association of Kansas City. Following these interviews a member of the research staff also contacted representatives of several large construction companies by telephone to determine their reactions to the three program possibilities. This report reflects the information and impressions gained from those interviews.

II. NATIONAL EMPLOYMENT OUTLOOK

Overall, the construction industry is expected to increase faster than average. One reason is that the large number of babies born during the post World War II babyboom (1945-1965) will continue to have an effect on the economy. There will be demands for housing and related construction activities as those persons reach their twenties and thirties.

The 1976-77 Occupational Outlook Handbook in Brief estimates that 4,204,000 people were employed in construction occupations during 1974. During the time 1974-85, there will be an estimated 188,300 annual openings. The greatest demand will be for carpenters (49,100 annual openings), construction workers (28,400 annual openings), operating engineers-construction machinery operators (27,000 annual openings), plumbers and pipefitters (23,500 annual openings), painters (16,700 annual openings), and electricians (11,700 annual openings). Other occupations included under the construction category are asbestos and insulation workers, bricklayers and stonemasons, cement masons, construction workers, drywall installers and finishers, elevator constructors, floor covering installers, glaziers, lathers, marble and tile setters, plasterers, roofers, sheet-metal workers, and structural-, ornamental-, and reinforcing-ironworkers, riggers, and machine movers.

Construction inspectors (government) and occupational safety and health workers are occupations related to the construction industry. Employment is expected to increase faster than average in both occupations. Employment in 1974 was 22,000 for construction inspectors and 1,700 annual openings are expected during 1974-85. Best opportunities will be for

those with knowledge of a specialized type of construction and some college. Similarly for occupational safety and health workers, best prospects will be for graduates of occupational safety or health curricula. Employment was 25,000 in 1974 with an estimated 1,100 annual openings.

III. THREE CONSTRUCTION PROGRAM ALTERNATIVES

Training For Entry Into The Skilled Trades

There appears to be very little possibility of the college implementing a successful program training persons to enter the skilled trades. Comprehensive union apprenticeship programs are already in operation. The Builder's Association Training Center trains approximately 700 people per week in the skilled trades. Apprentices receive 144 hours of training given one night a week for four hours. The programs are open only once a year as the need arises (usually between January and April). Most programs receive between 10 and 12 applications for each opening.

Since applicants must pass a test for entry into the apprenticeship program, the College could offer training designed to provide students with the skills needed to pass (e.g., mathematics, construction terminology, reading, basic drafting). A career program, however, would probably not be able to maintain a 75% placement ratio with the union program. Contractors also indicated that they have little trouble finding skilled craftsmen for non-union jobs.

The best possibility for the College to offer a program in this area might be to train hearing impaired or other handicapped students to take apprenticeship tests. Current legislation requests that all projects involving Federal money employ 14% Minority and 3.4% women.

Forthcoming federal legilation will likely require contractors on federal projects to employ a specified percentage of handicapped workers. A one semester program could be sufficient for many students, although some may need additional training. It should emphasize mathematics, basic construction terminology and reading blueprints and specifications, etc.. Special chemistry courses would be helpful for students planning to enter the painting or concrete related professions. One person interviewed stressed that there was a need to return to the basics of mathematics and reading and that great stress needed to be placed on "drawing what you read and reading what you draw." There is also some need for understanding basic art and colors as well as being informed about safety and the Occupational Safety and Health Act.

Training for Entry Level Field Technicians

Reactions were mixed on the feasibility of designing a program to train field technicians and supervisors. Estimators and project managers are often graduate engineers and field supervisors are quite often people who have "worked their way up through the ranks." Some contractors, though, did feel that a good two-year program stressing construction practice, contract law, and leadership skills would meet with great success. Others felt that the program would be beneficial, if jobs were available. However, they questioned whether enough jobs would be generated each year to absorb graduates of such a program.

It might be possible to develop a limited program by combining courses from the Engineering and Technology division and the Business and Economics division with some specialized construction practice

courses and/or on-the-job experiences. The program should stress leadership and communication skills, as well as technical skills.

In-Service Training Programs

The most popular suggestion for a program in construction technology was an in-service program to upgrade supervisory skills of working field supervisors. Many of the persons in these positions have received no formal training in the "personnel aspects" of field supervision. The need for such training has become so acute that the Associated General Contractors of America has developed its own training materials. These materials could be adapted to form the nucleus for special in-service programs sponsored by the College. The program could be offered in the evening or on Saturdays. One contractor expressed a willingness to pay tuition fees for supervisors attending such a program and others indicated they would be very interested in sending their people to a high quality program on supervisory techniques. If such a program could be developed and received favorable responses from the participating companies, it could provide a strong base for developing a comprehensive career program in the construction area.

The benefits of effective supervision are apparent to most contractors. By increasing productivity in the field they can realize tremendous savings. Since material costs in a construction project have little flexibility, effective use of the labor force is one of the few areas where companies can gain a competitive advantage. Contractors realize this and appear to be receptive to the idea of a program that could increase their supervisors' skills so that employee productivity can be high.

ADDENDUM

APPLIED TECHNOLOGY/BUILDING CONSTRUCTION

The applied technology program will provide training in the construction and metalworking crafts. Classroom and laboratory instruction will be combined with hands-on work experience with machines, equipment and products. The material in this Addendum was obtained after completion of the earlier report presented on the previous pages.

Employment

The employment outlook for both construction and metalworking crafts workers is favorable. In 1970, there were 16,950 construction and 7,390 metalworking crafts workers in the Kansas City SMSA. By 1978, there were an estimated 19,650 construction and 7,630 metalworking crafts workers. There are expected to be 600 annual openings for construction crafts workers and another 220 openings in metalworking crafts. The greatest demand will be for carpenters, electricians, plumbers, painters, machinists, sheetmetal workers and tool and die makers.

For the State of Kansas, the outlook is similar. One group of metalworking crafts workers--specifically the tool and die makers--are expected to show the fastest growth rate in the State of Kansas from 1978 to 1985. During 1970, there were 31,250 construction and 10,725 metalworking crafts workers in the State of Kansas. By 1985, there are expected to be 46,425 construction and 26,050 metalworking crafts workers.

In 1970, there were 2,727 Johnson County residents employed either as construction or metalworking crafts workers. Thus, approximately, 11 percent of these workers within the Kansas City SMSA lived in Johnson

County. On the basis of that percentage, there were 2,974 workers so employed in 1977.

From 1978 to 1985, there are expected to be 820 annual openings within the Kansas City SMSA, about 3,300 within the State of Kansas, and an estimated 108 annual openings for Johnson County residents.

Salaries

The 1977-78 Kansas Wage Survey conducted by the Kansas Department of Human Resources shows that the majority of persons employed as maintenance electricians or tool and die makers during late 1977 earned around $5.75 to $6.25 or more per hour within the region of the State that includes Johnson County.

Two salary studies were conducted by the JCCC Office of Institutional Research during summer 1977 and early 1978. Salaries for maintenance carpenters ranged from $3.85 to $7.99 while salaries for maintenance electricians franged from $3.85 to $8.78.

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Office of Institutional Research

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JCCC CHILD CARE CENTER FOR PRESCHOOLERS

ABSTRACT

There are three primary types of child care centers which JCCC could provide for preschoolers. One type, a child play center or part-day care service, could provide a day care service for children on a drop-in, as needed basis. A second type, a full-day care service, would be provided primarily for children attending on a regular basis. A third type would combine a full-day care center in conjunction with an educational program in child development.

A licensed play center would not be required to provide food service or napping facilities but could not enroll children for more than three hours daily. A full-day care service must include a pre-school component. The licensing regulations for a full-day care center offered in conjunction with the JCCC instructional program would require napping facilities and food service.

It is suggested, however, that JCCC should consider a full service child care center for preschoolers in conjunction with the instructional program. The mission of JCCC is education. Therefore, the primary reason for a comprehensive program is philosophical. Nevertheless, there are fiscal and physical facility factors which support this suggestion. The basic facilities and staff must be the same. Yet, children in the center, JCCC students and members of the community could derive maximum benefit from a comprehensive program. Students participating in such a program could be used to provide some instructional services.

An approved day care facility with a preschool could also be used for babysitting in the evening or on the weekends and for emergency child care during the day.

Office of Institutional Research

November 18, 1977

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JCCC CHILD CARE CENTER FOR PRESCHOOLERS

I. SCOPE OF PROGRAM

The staff at JCCC has discussed for several years the possibility of the college sponsoring a child care center. This suggestion was also frequently cited in the college-wide brainstorming sessions on master planning conducted last year. State approval for such a program, however, requires a considerable amount of planning.

Before any action can be taken, the college must determine the scope of a proposed child care center. The following questions should be answered:

- Will the center be designed primarily to provide babysitting services or will it be a full-service preschool?
- What ages of children will be admitted?
- How many children will be admitted?
- Will developmentally delayed or handicapped children be admitted?
- Will the program be full-day, part-day or combination of the two?

Answers to these questions will determine to a great extent facility and staffing requirements. For example, centers providing full day child care must have napping facilities and provide at least one meal. Infants and handicapped children must be on a ground floor facility and require a larger number of staff.

II. CHILD CARE SERVICES AT OTHER AREA COLLEGES

The other five area community colleges and two private colleges were contacted to ascertain whether they provided any child care services. Four of the colleges did not offer any services currently. One of these previously had provided babysitting for students enrolled in evening

classes and was considering offering that service again as well as a full day care service. Another was also considering the possibility of providing a baby sitting service.

The three colleges with child care services varied considerably. One provided essentially a baby sitting service for students while they were attending classes. Another had a full-day/part-day care center with a preschool component. The third provided a preschool for students or members of the community that was also used in conjunction with the educational program at the college. Facilities for these programs were equally varied: a room on campus, a double-wide trailer and space rented in an existing grade school.

III. APPLICABLE REGULATIONS FOR THREE TYPES OF DAY CARE FACILITIES

The scope of the program selected by JCCC will determine to some extent the licensing requirements that must be met. There appears to be three basic types of programs the College could consider. They are: 1) a play center or part-day care service, 2) a full-day care service, and 3) a full-day care center in conjunction with the instructional program.

All three of these types of programs come under the state licensing regulations according to the following definition:

> Child Care Center is defined as a day nursery providing care for seven or more children, for part or all of a day or night, away from the home of the parent or legal guardian; and includes full day child care, nursery schools, play groups, Head Start, centers giving emphasis to programming for special children, kindergartens not operated by the public schools, and other establishments offering care to groups of children for part or all of the day or night. Centers for infants and toddlers or for handicapped children may have fewer than seven children but be licensed as a center because the program meets child care center regulations.

The College might avoid meeting licensing requirements under two technicalities. First, state supported institutions do not need to be licensed. If the College is considered in this category, it would not be required to be licensed. Second, if the center is designed as a baby sitting service for students only while they are on campus, it might be ruled that the parents are technically present. The facility, therefore, would be exempt from licensing regulations. The precedent for such an exemption was set in conjunction with play centers in bowling alleys. There are several disadvantages to invoking such technicalities, though. Since they are technicalities and subject to interpretation, there is no assurance that the College will be exempt from the regulations. Even if it was ruled that the College could be exempted, the program would not be "approved." This might reduce parents' interest in the program.

If the College elects to provide an "approved" facility, it would probably be advisable to provide full-day care. Part-day care is care for less than three hours daily and might eliminate a number of potential users. The additional requirements which must be met to provide full-day care are the inclusion of a preschool component, food service, and napping facilities. The regulations do not differ for day care centers used in conjunction with an early childhood instructional program. In fact, there is an advantage in such a program because students in the program can be used to meet the adult/child ratio requirements. A center can also provide irregular care for two to six hours on an unscheduled or intermittent basis, as long as the number of children present at any

one time does not exceed the licensing limits. Thus, the center would have enough flexibility to provide emergency baby sitting when it is needed.

If a facility is approved for care during the day, it would also be approved for operation in the evening. A day-time pre-school could, therefore, be used as a play center for children of parents attending evening or weekend classes.

IV. STATEMENT OF PHILOSOPHY AND GOALS

To be effective a child care center must have a clear statement of philosophy and goals. This statement should address the following:

- views on the nature of the child
- educational philosophy
- method of instruction (e.g., Montessori, Precision Teaching, etc.)
- desired outcomes of the program
- parental role
- role of diagnostic testing

The college should also determine whether the child care center will be used in conjunction with the instructional program. If so, this should be clearly stated and the extent of student involvement should be determined.

V. STAFF SELECTION

Once the College has determined the type of program, a director should be hired. Qualifications of the director will be determined by the decisions regarding scope of the program. If the director or other staff members are to be involved in the instruction of JCCC students as

well as operation of the child care center, they will need more training and command higher salaries. It is important that the director be involved in the selection of support staff.

In determining staffing requirements the role of volunteers should be considered. Some preschools use parents with special talents (e.g., artists, musicians, etc.) to supplement their instruction. The Fairview Day Care Center in Olathe and the Lake Mary Center for Exceptional Children in Paola, obtained a federal grant to use senior citizens as "foster grandparents" for exceptional children. Students from child development courses at JCCC could also be used as aides to supplement their classroom instruction.

Staffing requirements vary with the types of students in the program. The adult/child ratio ranges from one to two for children under three years with severe disabilities to one to sixteen for normal school aged (6 to 16 years) children. Preschoolers require a ratio of approximately one to ten.

The center must submit a plan for staff and grouping of children to the licensing representative.

VI. SITE SELECTION

In selecting a site for a child care center the major requirements to be considered are:

A. Physical facility:

- There must be "two approved exits, one of which shall lead directly to the outside."
- There must be 35 square feet of useable floor space for each child (50 square feet for each disabled child).
- If disabled children or infants are admitted, their facilities must be on the ground floor.
- Napping facilities must be provided if the Center offers full-day care. The beds must be separated by two feet (three feet for children under 2½ years). Beds for children over two and one-half years may consist of 3" by 24" by 60" foam pads.

- There must be one toilet and one washbasin for each 12 children receiving care. They must be placed low or be provided with safety steps. Special facilities are required for physically handicapped children.

B. Playground

- The outdoor play area must be within safe walking distance of the Center and readily accessible to bathroom facilities.

- Minimum square footage of the area is 2,000 square feet plus 100 square feet for each child using the space at a given time. In centers enrolling more than one unit of children, there must be sufficient space to accomodate one-half of the children in attendance at any one time.

- There must be a separate playground for each two units of children playing at any one time.

- Playgrounds must be fenced.

- The play area must be arranged to provide both sunny and shady areas.

C. Food Service

- When children are kept five hours or more, at least one meal must be provided.

D. Additional Considerations

- If the center is to be used as an adjunct to the college's instructional program, observation booths should be provided and instructors should be given office space.

- A complete listing of regulations for licensing is available from the Kansas State Department of Health and Environment. A copy of the regulations is also available in the JCCC Office of Institutional Research.

VII. EXAMPLE OF A CHILD CARE CENTER PROPOSAL

The following section presents a tenative proposal outline for a child care center. This outline is presented to illustrate the processes involved in developing a proposal. It is not intended as a final recommendation. Rather it is one possible form a child care center could take and suggests one approach for consideration.

Philosophy

The JCCC Child Care Center believes that all children want to learn, to expand their capacities, and to grow as individuals. Nevertheless, each child is an individual with unique attributes and can best learn when instruction is individualized. To this end, we attempt to identify systematically each child's strengths and build on these while decelerating any unproductive behaviors which may hinder full development of the child's potential. We will create a stimulating environment in which children and parents can fully participate in the learning experience, an environment designed to enrich the child's social and intellectual development.

We believe that all children can learn together. Therefore, we provide flexible classroom placement for both normal and exceptional children. This placement is based on a careful and thorough assessment of skills rather than age. The curriculum in each content area is divided into discrete learning steps. Each child masters these steps at his or her own speed and the steps are small enough that every child can meet with frequent success.

Our teachers employ the principles of Precision Teaching. This method of instruction is based on identifying specific BEHAVIORS involved in learning and reinforcing these. We assess these behaviors and record the child's progress. We do not employ diagnostic labels nor do we allow them to influence our behavior toward children.

The JCCC Child Care Center is also associated with the College's academic program in child development. Students from child development classes will be encouraged not only to observe the children but to become actively involved in the program. We feel this will benefit both the children and the students.

Admission Policy

The JCCC Child Care Center will admit preschool children ages two and one-half years to six years. Admission, treatment, and services will be granted equally to all children without regard to race, color, sex, religion or national origin. We will encourage applications from both normal and exceptional children. The center will provide full-day or part-day care for two, three or five days per week. A maximum of 60 students will be accommodated at any one time.

Staff Selection

The director for the program shall have an advanced degree in child development, psychology, special education or a related area. The director should be capable of teaching at both the college and pre-school level. At least one teacher in each classroom should have a bachelor's degree since they will be responsible for supervising students from the child development area. An effort should be made to enlist volunteers from the community with special talents (e.g., music and art instructors) to serve as teacher aides. Students from child development classes at JCCC will also serve as teacher aides.

Site Selection

Ideally, the site for the child care center should be on campus. Given the scarcity of classroom space now available, this would probably require the construction of a new building. The building should have ample space for three to six classrooms, a library, a testing room, office, inside play area, access to playground facilities and observation rooms for students. Easy access for handicapped students should be stressed.

It might be possible to begin a small interim program in the existing facilities. If this is considered desirable, the College could identify several potential sites and request a licensing representative to determine whether any would be feasible.

Alternatively, the College could examine the possibility of leasing space in an existing off-campus facility such as a church, office or school.

VIII. DISCUSSION

The demand for preschool child care in Johnson County has been rapidly increasing during the last few years. The number of children ages three through five deceased from 1970 to 1977; yet the number of preschool child care centers has increased within the county. There are a variety of reasons for the increase in preschool child care demand. Some reasons are: 1) more families with two working parents, 2) more single parent households, and 3) more interest in preschool education. There is considerable speculation concerning future birth rate patterns. However, the number of persons ages 19-29 has increased 53 percent from 1970 to 1977. In addition, a larger portion of parents are likely to seek child care for their preschoolers.

On the surface, a day care center may seem more feasible than a preschool. Many people, including staff and students, would undoubtedly appreciate and use a center where children can be brought on a drop-in basis. However, that irregular pattern is precisely one of the major factors which could create fiscal problems. Without a regularly scheduled group of children to be served, there would be no assurance of regular income. Staff salaries will be an expensive

item as will some of the facility requirements.

A second fiscal problem relates to salaries. Within the county, most day care staff are paid low salaries. Many are paid minimum wage salaries. If JCCC were to pay comparably low salaries, day care staff would be considerably below other JCCC staff with similar degrees and experience. Yet, if JCCC were to pay the day care staff at a salary level comparable to other JCCC staff, community day care centers would undoubtedly be concerned. If JCCC were to provide a child care center, however, in conjunction with its instructional program, there can be justification for paying the staff on a level higher than that paid by most day care centers.

A child care preschool at an educational institution could be used in a variety of ways. Students at JCCC would have the opportunity to apply their classroom experiences in the preschool. Preschoolers who have exceptional characteristics could benefit from the preschool experience. Managers and staff at existing child care centers and preschools could obtain additional training. Parents of children in the preschool would directly benefit, and parents of other preschool age children could gain from special workshops or observation.

In addition to the obvious benefits that would be added to child development courses, a preschool could also complement other career programs. Some of those career programs are dental hygiene, dietetic technology, handicap assistant, home management, hospitality management, mental health technician, nursing, occupational therapy and physical therapy assistant. Some of the mentioned career programs would gain maximum benefit if the preschool enrolled a variety of children with different needs.

LOCAL EMPLOYMENT PROSPECTS FOR DENTAL LABORATORY TECHNICIANS

ABSTRACT

The Office of Institutional Research surveyed Johnson County dental laboratories concerning employment prospects for dental laboratory technicians. Results of the survey indicated that there appears to be a strong demand for dental laboratory technicians in Johnson County. Nevertheless, starting salaries were generally low and, while most employers felt that some postsecondary training would be an asset for a job applicant, they did not require such training. It is not clear whether potential students would benefit more from a two year training program or from two years' job experience.

If a decision is made to implement a dental technology program, recruitment and student selection will be major factors influencing the success of the program. In addition, local laboratories will need to be convinced that graduates of the program can make an immediate contribution and deserve greater compensation than untrained persons.

Thus, it might be advisable for the college to consider an interim abbreviated dental technology program. Such a program could be implemented with substantially less investment in new facilities, staff or equipment. It also would give students enough training to put them at competitive advantage in the job market without requiring an extensive investment in education. By carefully monitoring the program, the college could determine the feasibility of a two-year program.

Office of Institutional Research

November 4, 1977

LOCAL EMPLOYMENT PROSPECTS FOR DENTAL LABORATORY TECHNICIANS

I. INTRODUCTION

Pioneer Community College may terminate its program in dental laboratory technology and JCCC has been asked to consider offering this training. The program is currently the only one offered in the Kansas City area. However, since JCCC would need to install new equipment and laboratory space, it would be an expensive program to implement. To determine whether such an investment is advisable, the Academic Vice President asked the Office of Institutional Research to summarize the employment prospects for graduates of such a program.

National Employment Prospects

Nationally the prospects for dental laboratory technicians appear to be quite favorable. The United States Bureau of Labor Statistics estimates that 32,000 technicians were employed in 1974 and that an average of 2,600 openings will occur annually between 1974 and 1985. (Occupational Outlook Handbook in Brief, 1976-1977 Edition). Prospects are summarized as follows:

> Employment expected to grow faster than average for all occupations in response to increasing demand for dentures. Very good opportunities for graduates of approved programs.

II. LOCAL MARKET SURVEY

In order to determine whether local employment prospects reflect this favorable national outlook, the Office of Institutional Research conducted a telephone survey of Johnson County dental laboratories.

The Office of Institutional Research was able to contact the owners or managers of all but one of the 14 dental laboratories listed in the "yellow pages" for Johnson County by telephone. Respondents were asked

a series of specific questions concerning employment at their laboratories and an open-ended question seeking comments about the feasibility of a dental laboratory technology program and suggestions for curriculum.

Local Employment Prospects

A total of 94 technicians were employed at the 13 laboratories contacted. Most of the laboratories employed two to six technicians, but the size varied from a one person laboratory to one employing 32 technicians. Six laboratories had a total of seven current vacancies. Annual turnover rates varied from less than one to between four and five vacancies. All but three of the laboratories anticipated adding at least one position in the next year or two. Altogether the laboratories hoped to add between 21 and 24 positions in the next two years.

None of the employers required education beyond the high school level. A majority (70%) of the respondents, however, felt that a person who was certified or who had completed a two year program would have an advantage in the job market. Starting salaries were generally low, ranging from the minimum wage, $2.35 per hour to between $3.00 and $5.00 per hour. Salaries for "good, experienced technicians" though could range as high as $20,000 per year.

III. DISCUSSION

The information obtained from Johnson County dental laboratories indicates that there should be ample job opportunities for technicians. Nevertheless, none of the laboratories currently requires education beyond the high school level. A person can enter the profession relatively easily without formal training. Thus, the major consideration becomes

whether two years spent in school would be more of an advantage than two years of on-the-job experience. The schooling would likely give a person an advantage over someone with no experience but it might not give the person an advantage over someone with two years' experience.

The Office of Institutional Research also contacted two local technicians who had experience in designing and/or accrediting dental laboratory technology programs. They had different reactions toward the advisability of implementing a program at JCCC. One felt that it was an excellent idea and that the program would have no difficulty placing students. The other felt that there was no need for a two-year program and felt that graduates would have great difficulty finding "appropriate" positions. Moreover, that individual felt that a two-year program could not offer adequate training in the five specialty areas of dental laboratory technology.

Both of these technicians felt that, *if a program were implemented,* it should allow students to receive extensive training in a particular specialty area. They felt that a program which provided a year of general background courses and a year of specialized courses would be advisable. They also proposed that potential students be carefully selected to assure that they have the skills (primarily manual dexterity) and disposition to succeed in the program. Several laboratories have standard tests they use to judge a trainee's aptitude.

IV. OTHER CONSIDERATIONS

Before a decision is made on implementing a dental laboratory technology program, a number of other considerations should be addressed. Some of the more important are summarized below.

Staff Education and Availability

The guidelines on accredition issued by the American Dental Association list no specific educational requirements for faculty in approved programs. According to the Commission on Accreditation:

> Dental laboratory technology faculty members should have background in and current knowledge of dental laboratory technology and specific subjects they are teaching. Faculty experience should include teaching or completion of courses in education theory and practice. ...(T)hey should have attained certification by the National Board for Certification of the National Association of Dental Laboratories...(or) be currently working toward that objective. (Requirements and Guidelines for Accredited Dental Laboratory Technology Education Programs, August 1975, pp. 8-9.)

Given these requirements, it would seem likely that many available faculty applicants would not have bachelor's degrees (the three instructors at Pioneer, for example, do not). Placing such instructors on the faculty salary ranges at JCCC while still offering a competitive salary could be difficult. Determining selection criteria will also be difficult since, for many applicants, there may be no academic credentials to consider and one person's academic credentials might have to be judged against another's experience.

Student Interest and Recruitment

The fact that there appears to be a shortage of dental laboratory technicians even though educational requirements for entering the profession are minimal suggests that there may be some difficulty attracting students. Therefore, recruitment should be an important part of the

program. Since the technician's job involves close attention to detail and good manual dexterity, these skills should be emphasized in student recruitment and selection. One possible source of students who would benefit from this kind of training is paraplegics needing job training or retraining.

Cost of Implementing the Program

A dental laboratory technology program would be rather expensive to implement. Equipment costs could run as high as $100,000 or more. Laboratory space for housing the program could also be quite expensive.

Possibility of an Abbreviated Program

The difficulties cited earlier suggest that the college should consider the possibility of offering an abbreviated program in dental laboratory technology. Since employers do not require formal training and starting salaries are generally low, students may be reluctant to invest two years in a training program. Furthermore, the technicians contacted did not feel that a two year program could adequately prepare a technician in all specialty areas of the profession. On the other hand, most employers felt that some training would be a definite asset to a student. Therefore, the ideal program at this time might be one year (or less) in duration and train students in areas such as dental terminology, basic anatomy and basic sculpture techniques using ceramics and porcelain. This type of program would give students the basic skills needed to enter the profession, and put them at a competitive advantage, but would still not require a considerable investment of time. Upon completion of the program students could enter the job

market and learn the specialized skills on-the-job or they could transfer to a four-year program. This type of program could also be implemented immediately using existing facilities and staff for some of the instruction. If this program were successful, the college could later expand it to a full two-year program. Beginning with this interim abbreviated program would provide the college with an opportunity to judge the benefits of the program to students and to promote the advantages of an expanded program among local laboratories.

AN EQUINE MANAGEMENT PROGRAM AT JCCC

ABSTRACT

A recent study completed by Midwest Research Institute in 1977 found that "one out of every six people in the Kansas City work force is directly or indirectly supported by agribusiness." Yet, only one college in the Metropolitan Kansas City area offers courses in agribusiness. Currently, JCCC and Maple Woods Community College offer a cooperative program is animal health technology. The primary thrust, however, is small animals and JCCC is limited to only two students in the total program.

Johnson County Community College (JCCC) is planning an Equine Management Program which would serve both the career and avocational needs of the community. The program will include courses in riding and training, equine health and care, and stable management.

Although some graduates of an Equine Management Program will not be seeking employment, there is about one job in the horse industry for every 320 jobs, so well-trained individuals should be able to find suitable employment. Students entering the program should be informed that they may need to seek employment outside the immediate area. However, the current mobility of our society, particularly for those individuals in their twenties and thirties, is such that a large number of graduates in any program are likely to move outside the metropolitan Kansas City area.

Office of Institutional Research

March 29, 1978

AN EQUINE MANAGEMENT PROGRAM AT JCCC

I. BACKGROUND

For the last six years, Johnson County Community College has been discussing the preservation and meaningful utilization of a barn existing on the 220 acres purchased for the permanent College campus. A consultant was hired in spring 1977 to do an assessment of possible uses for the barn. The recommendation was to make some structural repairs to the barn as well as the necessary outdoor improvements so that the College could offer classes in horseback riding and horse training on campus. Those repairs and improvements are now nearing completion.

According to The American Horse Council (16), there were 8.5 million horses in the United States in 1975. There were 195,000 in Kansas and 215,000 in Missouri. In addition, the 3.2 million horse owners spend approximately $15 billion annually on feed, equipment, drugs, horses, land, buildings and related items. The American Horse Council (AHC) extimated that the number of registered foals has increased by 52 percent between 1968 and 1975. The AHC also estimated that total federal, state and local revenues from racing and related industries approaches one billion dollars annually. Thus, the owning and caring of horses is indeed "big business."

II. CAREER PROGRAM PURPOSE

During the last year, there has been a growing awareness that the overall horse industry offers employment to a large number of individuals in a variety of jobs. Thus, a career program has been proposed to serve the needs of individuals who seek education in the field of equine

management. However, the growth of continuing education and community service programs within Johnson County during the last few years requires that the avocational needs of the community also be considered in the development of new programs.

The Equine Management Program at JCCC is intended to serve people in the community who simply wish to improve their understanding of the nature, care, and training of horses as well as those people who desire to prepare for careers in the horse industry. The program will include courses in equestrian skills (western, eastern and hunt seat riding instruction), horse training techniques, equine science (anatomy, nutrition, breeding and health care) and busiress management.

III. EXISTING PROGRAMS

The Proceedings for the Second Annual Youth Horse Show Symposium (11) held February 24-25, 1978, at the University of Missouri--Columbia, listed 100 accredited junior and senior colleges offering courses in equitation and/or horse science and nine of those 100 were community colleges located in Arizona, Colorado, Delaware, Florida, Iowa, Virginia and Wyoming. The Proceedings did acknowledge that the list was not complete since the information was collected about one year prior to printing. The National Horse and Pony Youth Activities Council plans to publish an update in 1979.

The program at Northwest Community College in Powell, Wyoming, is a Horse Management and Training Program. The catalog (10) recommends that students take classes in business or science to meet "the sophisticated demands of today's market."

The Proceedings also listed five veterinary-technician training programs located in Georgia, Kansas, New Jersey, North Carolina and Washington. The one in Kansas is located at Colby Community College. Young and

Maltby (16) reported a placement rate of 95 percent for graduates of the Colby program. A telephone inquiry during March 1978 to Colby confirmed that placement rate. There is currently also a second program, Horse Production, at Colby Community College which stresses breeding and management of horses. The placement rate for that program is comparable to that for the veterinary-technician program. Students in the program are aware that some graduates will need to relocate for job placement.

Locally, Park College offers an equine major. Maple Woods Community College and JCCC jointly offer a cooperative program in animal health technology. JCCC began participation in that program during fall 1977 and is limited, however, to only two students. The balance of the space in the program is reserved for Maple Woods students. Neither the Park nor Maple Woods programs were listed in the above mentioned Proceedings. The Maple Woods program was undoubtedly excluded since the primary thrust is small animals rather than equines.

The Head of the Department of Equine Science at Scottsdale Community College, Socttsdale, Arizona (13), was invited as a consultant to JCCC during October 1977. The Scottsdale program enrolls slightly more than 300 students. Approximately 80 percent enroll to either upgrade their skills and knowledge (45 percent) or to enter the field (35 percent). The remaining 20 percent do not enroll for purposes of seeking employment. Some of the jobs obtained by their graduates have been at feed stores, stables, tack stores, teaching, sales or breeding farms.

The Equine Center at the University of Missouri--Columbia cited some pertinent general information about equine science in a brochure (4)

describing that program. The following two major points were made. One was the expanding horse industry requires equine research in the areas of conception, disease control and prevention, and nutritional requirements. Secondly, the horse can serve as a model for studying diseases in people since the cardiovascular, pulmonary and arthritis problems of horses are similar to those of humans.

IV. JOB OPPORTUNITIES

The rate of growth for the horse industry slowed down during 1977, but there were still almost 250,000 full-time job equivalents in the horse industry, or about one job for every 37 horses (11). The concensus in The Proceedings (11) was that the number of horses and number of jobs in the horse industry will continue to increase.

Some jobs such as breeders, trainers, managers or sales are readily identified as relating to an equine program. However, many jobs exist which relate both to an equine program and another field. The Proceedings (11) listed in diverse number of such jobs available in the industry by the level of required education. The following are sample jobs listed as requiring at least one year of education beyond high school: director of advertising, laboratory technician, commercial artist, technical-equipment installer, fire prevention specialist, program coordinator (in charge of printed program or sequence of area events), veterinary technicians, reporter, transportation specialist and motion picture cameraman.

The following sample jobs were listed as requiring at least two years of education beyond high school: horse-show manager, soring inspector, drugging inspector, clothing designer, blood-typing specialist, technical representative to solve equipment problems and artificial inseminator.

The jobs available for persons with at least a bachelor's degree are equally diverse. Employment data for persons in an equine related field are not typically collected at that level of detail. However, the future employment outlook for veterinarians should be somewhat representative. The 1976-77 Occupational Outlook Handbook in Brief (2) estimated that there were 29,000 veterinarians employed in 1974 and there would be 1,450 openings each year from 1974 to 1985. The employment trends and prospects are cited below.

> Favorable employment opportunities as result of growth in pet population and number of livestock and poultry and increase in veterinary research.

The Horse Industry Directory (1) for 1977 listed 70 horse industry organizations with specialities such as horsemanship for the handicapped, equine health and protection, libraries/museums, racing, rodeo, show, sport, trails and youth. There were also listed 68 breed associations, 32 state horse councils, 34 extension specialists whose primary duties concerned horse programs and 17 extension specialists whose duties partially were related to horse programs. In 1977, there were 157 equine periodicals published in the United States which were either of general interest or which specialized in a certain aspect of the horse industry. The large number of periodicals and horse industry organizations illustrate again some of the diverse job opportunities which exist for a person knowledgeable about horses.

V. RELEVANT STUDIES AND INFORMATION

Cross and Valley (3) in their survey of 3,001 potential adult learners found that 11 percent were interested in learning about agriculture and 28 percent were interested in sports and games. When restricted to only one area of learning, three percent were interested

in agriculture and two percent in sports. For many persons, horses are an avocational interest and, for some persons, would be a sports activity. When asked whether they had received any instruction in the last 12 months, one percent had received instruction in agriculture and four percent in sports. The percentages may seem small, but one percent of a 50,000 adult population is 500 people. Johnson County had 55,003 people ages 18-29 in 1977.

Redner (12), who conducted a telephone survey of adults in Illinois, found that 1.6 percent were interested in agriculture and less than one percent were interested in sports. Redner also conducted a survey of high school juniors and seniors and found that 7.4 percent were interested in agriculture. The results for agriculture raised the question whether high school students were realistic about future career opportunities. Redner, however, concluded that a real need existed for a two-year program in animal science or agronomy. The only agriculture related classes being offered in that area were given by the County Cooperative Extension Service.

Fritsch and Lorenz (6) identified potential training requirements in allied agricultural industries. Their conclusion was that additional training was needed by the Texas labor force in production agriculture (includes both animals and plants).

Mannebach (7) in 1973-75, conducted a federally sponsored study in Connecticut to determine employment opportunities for vocational agriculture graduates. One conclusion was that more courses were needed on horse management and care; agricultural business skills; agribusiness management, customer relations, salesmanship, promotion and product knowledge . A second conclusion was that basic production agriculture should

include the care and management of pleasure animals.

Stevenin (14) has indicated that an "astonishing weakness of career education is that it is often carried out in almost total disregard for the community in which the school is located." From an economic standpoint, agribusiness activities are a significant factor in total employment for the Metropolitan Kansas City area. According to a recent study by Midwest Research (8) "one out of every six people in the Kansas City work force is directly or indirectly supported by agribusiness." During 1976, almost six billion dollars were received from agribusiness and agricultural production in Metropolitan Kansas City and that dollar "amount is equal to two-thirds of the total sales and receipts derived from all manufacturing activity in the Metropolitan area (8)."

The study by Midwest Research Institute showed that in 1976 there were 346 people employed in the Kansas City area by agricultural organizations operating on a membership basis. Their revenue of more than 15 million dollars was received from membership services such as animal registrations and transactions, horse and livestock shows, and membership fees (8).

Yet, only one college in Metropolitan Kansas City offers courses in agribusiness. Over 100 employees of one company alone are pursuing coursework in that area at the college. Stevenin (14) also encouraged colleges to include courses that would prepare students to be managers and supervisors as well as specialists.

There are 19 stables listed in the Metropolitan Kansas City telephone directory and six are within Johnson County. There are also two horse breeders, one horseshoer, one livestock-horse show and rodeo, four

horse trailer sales and repairs plus some miscellaneous horse related companies in the Metropolitan Kansas City area.

VI. OTHER RELEVANT FACTORS

There are a number of other factors which should be considered in the development of an Equine Management Program. Three important factors are the farm employment outlook, the avocational needs of the community, and the location of employment for program graduates.

Farm Employment Outlook

Farm employment is projected to decline within the Kansas City SMSA (9) during the next seven years. There has also been a decline in farm income during the last four years in the State of Kansas, but the decline is projected to cease during 1978 (5). Even if there is a continued decline, however, there is need to avoid the confusion between employment on farms and employment for graduates of an Equine Management Program. The reason for any decline in farm employment requires careful consideration. The Department of Labor and Industrial Relations for the State of Missouri (9) has predicted that the increasing use of machinery and technology in farming will reduce farm employment. However, that decline will increase employment in the areas of farm technology and machine manufacturing. A gain of more than 10 percent for manufacturing is projected for the Metropolitan Kansas City area between 1974 and 1985. Not all that gain will be agricultural, of course, but the Midwest Research Study (8) showed that agricultural related products comprised 19 percent of the sales for all manufactured products in the Kansas City area during 1976.

Avocational Community Needs

It would be expected that many students would enroll in courses for avocational interests. Scottsdale Community College in Arizona has about 20 percent enrolling in courses with no intention of seeking employment.

According to The Proceedings (11) cited earlier in Section III, considerably more than half the horses in the United States are "pleasure horses," that are "neither raced nor shown as the horse's major activity." The existence of 4.25 million pleasure horses in the United States is certainly indicative of the interests of many adults in equine related activities. In addition, the Department of Commerce's 1973 Statistical Abstract of the United States (15) shows that 8.7 million people or about five percent of persons ages 12 and over participated in horseback riding during June, July and August 1972.

Participation in the program will not require ownership of a horse. A person also need not be an expert rider if their main equine interests are not directly related to horseback riding or training. So there could be a variety of avocational reasons why an individual would enroll in equine management courses.

Program Graduate Placement

Not all graduates of a JCCC program can expect to find employment in Johnson County. However, there are three important issues which need consideration.

One is the avocational needs of the community discussed in the previous section. Specifically, some students will be enrolling in the program for purposes other than employment.

Secondly, not all graduates will be expected to seek employment in Johnson County. Certainly, most adults with established homes will tend to stay within the Metropolitan Kansas City area. However, students in their late teens or early twenties who complete the Equine Management Program can be expected to have a very high probability of either wanting to leave the area or at least being willing to do so. Those students still form the major share of our student body and their needs are increasingly easy to overlook.

Finally, some students would be expected to enroll in the Equine Management Program for the purpose of up-grading their skills and knowledge. Such students would already be employed and would most likely enroll at JCCC on a part-time basis.

VII. SUMMARY

To gain some perspective on the large number of horses in the United States, there is a ratio of approximately one horse for every 25 people. Since there is about one job in the horse industry for every 37 horses, there is about one full-time job equivalent for approximately every 900 people. Of course, the distribution of horse industry related jobs is not uniform throughout the United States, but there are a large number of equine related jobs.

Applying the United States ratio of horse industry related jobs to the overall population within the Metropolitan Kansas City area results in an estimate of about 1,400 such jobs. The Midwest Research Institute Study (8) cited 346 people employed in the Kansas City area just by agricultural organizations operating on a membership basis. Therefore, 1,400 does not seem an unreasonable number.

Many of the equine related jobs would relate to other existing JCCC career programs such as journalism and commercial art. Proposed programs such as the fire science program would offer opportunities for interested persons to combine equine management with another career area like fire science.

Students entering the program with the intention of seeking entry-level employment should recognize that they might need to leave the immediate area for employment in the horse industry. However, not all students in the equine management courses will be expected to seek employment. If the ratios for Scottsdale Community College are representative, about 20 percent would enroll for avocational purposes and 80 percent to either up-grade their skills and knowledge (45 percent) or to enter the field (35 percent).

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FIRE PROTECTION AND PUBLIC SAFETY TECHNOLOGY
CAREER OUTLOOK

ABSTRACT

Johnson County Community College will be implementing a Fire Protection and Public Safety Technology Program during fall 1978. Planning for the program began in 1971 and has received continuous support from the Johnson County Fire Chiefs' Association in the form of assistance in documenting the need and providing suggestions for the content and facilities.

From 1969 to 1977, the number of states with colleges offering fire science programs has increased from 29 to 45 and the number of colleges from 144 to 322.

Congress established a National Fire Prevention and Control Administration in 1974. That action has encouraged state governments such as Kansas to begin developing state plans for educating and training fire service personnel.

There are projected to be 7,300 openings each year for fire fighters nationally and 50 within the Kansas City SMSA. The biggest demand for education, however, can be expected from those already employed. The establishment of standards for fire fighters together with changing technologies will require or at least encourage employed fire fighters to continue their education. There will also be employment opportunities in areas such as insurance for persons knowledgeable about fire protection and public safety.

Office of Institutional Research

78 April 4, 1978

FIRE PROTECTION AND PUBLIC SAFETY TECHNOLOGY
CAREER OUTLOOK

I. BACKGROUND

In the spring of 1971, Johnson County Community College began to explore the feasibility of a Fire Science Technology program. Planning approval for the program was received October 5, 1971, from the Kansas State Department of Education (KSDE). Two courses, Fire Suppression and Fire Science Photography, were taught during the spring of 1972 through the continuing education program.

On July 6, 1972, approval was again received from the Kansas State Department of Education (KSDE) to use local two mill money for continued planning and part-time operation. The designated representative of the KSDE cited the program objectives as being "good." Since 1972, there has been continued exploration of the final purpose for the program. The JCCC Board of Trustees approved a Fire Protection and Public Safety Technology program during February 1978 to begin fall 1978.

II. CAREER PROGRAM PURPOSE

The final Fire Protection and Public Safety Technology program has been designed to serve a variety of student and community needs. The initial thrust of the program will be to provide in-service education for fire fighters. However, students may obtain a 30 credit hour Certificate Program in any one of the three areas--Fire Prevention, Fire Protection or Fire Service Administration. An Associate Degree can be obtained by completing two of the previously mentioned Certificate Programs or by completing one Certificate Program and an additional 30 credit hours of relevant technical or non-technical course work.

The flexibility of the program options will enable JCCC to provide advanced professional training for fire fighters, architects, insurance adjustors, and other individuals with fire and safety interests.

III. EMPLOYMENT OUTLOOK

National

In 1974, there were 220,000 persons employed as fire fighters in the United States. The U.S. Department of Labor has projected that there will be 7,300 openings each year until 1985. (Occupational Outlook Handbook in Brief, 1976-77 Edition) and has characterized the overall trends as follows:

> Employment expected to increase about as fast as average for all occupations in response to growing need for fire protection and replacement of volunteer fire companies by professional fire departments. Keen competition for jobs in urban areas; better opportunities in small communities.

Kansas City Metropolitan Area

The Missouri Department of Labor and Industrial Relations (Kansas City SMSA Employment Outlook, March 1977) states that employment of fire fighters had increased from 1,610 persons in 1970 to 1,920 persons in 1974 within the Kansas City Standard Metropolitan Statistical Area. The number of openings each year was projected to be 50 per year until 1985 with 30 due to new positions and 20 due to replacements.

Johnson County

According to the 1970 Federal census, there were 131 people employed as firemen or in the field of fire protection. The employment data for the census are for residents of the county and include those residents

working outside the county. However, a report to JCCC during June 1976 by the Johnson County Fire Chiefs' Association Educational Committee reported 182 salaried and 280 volunteer personnel in the Johnson County fire departments. Therefore, most of the 131 people in the 1970 Federal census probably were employed within Johnson County.

On the basis of the previously cited data for 1970, Johnson County employed eight percent of the fire fighters within the Kansas City SMSA. Applying that percentage to the projected number of annual openings results in a projection of four openings within Johnson County each year. However, Johnson County's population growth since 1970 has surpassed that of the other counties within the SMSA. In 1970, Johnson County was 17 percent of the Kansas City SMSA, but by 1975 was 19 percent. Therefore, the number of actual openings in Johnson County can be expected to exceed eight percent of the openings for the Kansas City SMSA.

IV. COLLEGE FIRE SCIENCE PROGRAMS

The National Fire Protection Association lists 322 colleges currently offering fire science courses in 45 states and the District of Columbia. Not all those colleges offer complete programs, but the list is also undoubtedly not current due to printing lag. One of the 322 colleges is in Kansas (Wichita State University) while three are in Missouri (Central Missouri State University, Forest Park Community College and Penn Valley Community College). In general, the majority of colleges listed were community or junior colleges.

Donald Favreau in 1969 developed "Guidelines for Fire Science Education Programs in Community and Junior Colleges" under the auspices of the American Association of Community and Junior Colleges. Although the document now is dated somewhat, the report does provide some insights into the role that two-year colleges have in fire science technology programs throughout the United States. From 1964 to 1969, the number of two-year colleges offering fire science programs increased 50 percent to a total of 142. Two colleges were listed as offering a four-year program for a total of 144 programs in the United States. Programs in 29 states plus the District of Columbia were attracting in-service fire fighters as well as people in oil and chemical corporations and insurance companies.

V. COMMUNITY SUPPORT

The Johnson County Fire Chiefs' Association which represents all 19 fire departments has been supportive of a JCCC Fire Protection and Safety Program since 1971. That association's Education Committee conducted a survey during 1975 of paid and volunteer fire fighters. Results showed that 87 of 182 paid personnel and 69 of 280 volunteers were interested in fire science courses. Thus, 48 percent of the salaried fire fighters and 25 percent of the volunteers expressed interest in such a program.

In the fall of 1975 the Johnson County Fire Chiefs' Association formally endorsed a fire science program at JCCC. A request was made to have a committee from the Chiefs' Association work with JCCC in establishing courses.

In January 1977, the Johnson County Fire Chiefs' Association again expressed the need for a program at JCCC. The establishment of a fire service training program at Kansas City Kansas Community College (KCKCC)

had attracted more than 35 fire fighters from Johnson County. However, it was felt that the JCCC program was needed to support and supplement the KCKCC program. Subsequently, the association's Educational Committee developed a report which summarized their thoughts on course content and model training facilities.

In October 1977, the Johnson County Commissioners requested comments from the Johnson County Fire Chiefs' Association concerning six issues. One of the questions was "Would the proposed JCCC program lead to a resolution of Johnson County needs?" The response was affirmative and in 1978, the Johnson County Fire Chiefs' Association obtained letters of support for the proposed JCCC program from 18 Johnson County fire departments.

VI. NATIONAL AND STATE ACTIONS

On October 29, 1974, Congress established the National Fire Prevention and Control Administration (Public Law 93-498). Assistance is to be given to "state and local fire service training programs through grants, contracts or otherwise." On November 20, 1974, the National Fire Protection Association adopted a "Standard for Fire Fighter Professional Qualifications, NFPA No. 1001-1974." The standard covers the requirements for entrance into a fire department and the first three levels of progression thereafter. The standards apply to master mechanics and alarm operators as well as to the fire fighter, the airport fire fighter, the driver/operator and the emergency medical technician.

In April of 1977, Governor Robert F. Bennett advised the National Fire Prevention and Control Administration (NFPCA) that the State of Kansas planned to participate in the Academy Planning Assistance Program,

a program of financial assistance to states. A proposal was funded by NFPCA to develop a Statewide Organizational Design for the Education and Training of Fire Service Personnel in Kansas. The purpose of the Organizational Design is to "assess the education and training needs of fire service personnel and others engaged in fire prevention and control activities throughout the state" and "an effort to inventory the resources available in the state to meet these training needs." The Director of the JCCC Engineering and Technology Division has been appointed, as the representative of two-year colleges, to the Advisory Committee for the development of the Statewide Organizational Design.

The Fire Science Training Division of Continuing Education at the University of Kansas has been designated as the Kansas unit to coordinate the state's participation in the Academy Planning Assistance Program. Fire department training programs are conducted at the local level throughout Kansas. Weekend and one or two day specialized programs are conducted throughout the year to supplement the State training program.

VII. SUMMARY

From 1969 to 1977, the number of colleges offering fire science programs has increased 124 percent from 144 to 322. During that same time, the number of states with colleges offering fire science programs has increased from 29 to 45. Two-year colleges are offering the majority of programs.

Initially, a new program will undoubtedly be in demand by area fire departments to provide in-service education to existing staff. Employment outlooks, however, are favorable both nationally and locally. There will be some openings for fire fighters, but employment opportunities in related areas such as insurance should not be overlooked.

EMPLOYMENT PROSPECTS FOR MEDICAL LABORATORY TECHNICIANS IN THE GREATER KANSAS CITY METROPOLITAN AREA

ABSTRACT

The Office of Institutional Research conducted telephone interviews to determine employment potential for medical laboratory technicians. Twenty-two hospitals and four private laboratories were contacted. Results of the survey indicated a rather strong anticipated demand for technicians. Five hospitals anticipated adding 18-20 such positions within the next year or two. Employment prospects appear to be best in fairly large hospitals which do not offer training for medical technologists. The job market should be monitored regularly, though, because it could be affected by the availability of trained technologists and changes in federal legislation regarding qualifications for laboratory workers.

National employment projections predict an increasing use of technicians. If this trend occurs in Kansas City employment prospects for technicians could become even more favorable.

Office of Institutional Research

January 12, 1978

EMPLOYMENT PROSPECTS FOR MEDICAL LABORATORY TECHNICIANS IN THE GREATER KANSAS CITY METROPOLITAN AREA

I. INTRODUCTION

Johnson County Community College (JCCC) and Penn Valley Community College, one of the Metropolitan Community Colleges, have discussed the possibility of a cooperative program training Medical Laboratory Technicians. Penn Valley currently is offering the program and would reserve five openings for students from JCCC. The technician program involves one year of classroom instruction followed by a year of intensive laboratory training. The program is designed to prepare students for careers in clinical laboratories in hospitals and physician's offices, or in independent medical laboratories under the direct supervision of a Medical Technologist. Graduates of the program receive an Associate of Applied Science Degree and are eligible to apply for certification as a Medical Laboratory Technician (MLT) through the American Society of Clinical Pathologists' (ASCP) Registry Examination. The program is also designed to allow students to transfer into baccalaureate programs in Medical Technology.

The Office of Institutional Research was asked to provide information concerning the employment prospects for MLTs so that the College could better evaluate the advisability of entering the program.

II. NATIONAL EMPLOYMENT TRENDS

The United States Bureau of Labor Statistics predicts that employment of medical laboratory workers is "expected to increase faster than average for all occupations" between 1974 and 1985 (Occupational Outlook Quarterly, Spring, 1976). The Bureau estimated that nationally 175,000 persons were

employed as medical laboratory workers in 1974 and projected an average of 18,800 annual openings between 1974 and 1985. However, there are a number of training opportunities available in this field and it is fairly popular. Thus, "despite an anticipated strong demand..., the number seeking to enter the field is expected to exceed the number of openings.... Consequently, job-seekers in this field may face competition for positions of their choice" (Occupational Outlook Handbook, 1976-77 Edition, p. 460).

III. LOCAL EMPLOYMENT PROSPECTS

In order to estimate the job potential for MLTs in the Kansas City area, laboratory supervisors at 22 hospitals and four private medical laboratories were contacted via telephone by a member of the research staff. They were asked how many technicians they employed, whether they had any openings or anticipated adding positions within the next year or two, the education and/or certification requirements, starting salaries, and the source of most of their technicians. Similar information was sought for medical laboratory assistants. Additional comments regarding their impressions of the job market and feasibility of the training program were also encouraged.

Thirteen of the hospitals contacted employed persons in technician positions. They employed a total of 77 such persons; the number employed ranged from 2 to 25. Two hospitals had openings for technicians and five anticipated adding 18 to 20 positions within a year or two. Six of the 13 hospitals employing technicians required that they be certified, and two of the seven who did not require certification preferred applicants who were certified. Starting salaries for certified

technicians ranged from $3.80 per hour to $6.30. Most were approximately $4.00 per hour.

Nine of the hospitals employed a total of 37 laboratory assistants (some of the technician positions discussed above were actually positions between assistants and technicians and did not readily fit either category). Two hospitals had openings for assistants and one anticipated adding four positions within a year. Only one of the hospitals required certification and none of the others had education requirements beyond the high school level. Salaries ranged between $3.04 and $3.90 per hour. The median salary was $3.48 per hour.

None of the private laboratories contacted employed either technicians or assistants. Several indicated that they would consider employing technicians if they could be approved by the Center for Disease Control (CDC). The CDC is responsible for monitoring and setting standards for independent laboratories.

IV. PENN VALLEY PLACEMENT

Three groups of students (approximately 30 total) have completed the Penn Valley MLT program. All but one of the students who completed the ASCP certification exam for MLT have passed. Students have generally also been successful in obtaining suitable employment. Of those who actively sought employment, only one has yet to obtain a position. Ten students have begun taking additional coursework in order to qualify as medical technologists.

Graduates have been or are now employed in the Kansas City area at the following facilities: Community Blood Center, University of Kansas Medical Center, North Kansas City Hospital, Menorah Medical Center, Medical Center of Independence, Martin Luther King Hospital, Kansas City College of Osteopathic Medicine Center for Health Sciences, Home Office Reference Laboratory. In addition there are program graduates who have relocated and are employed in Topeka, Kansas; Manhattan, Kansas; Rolla, Missouri; San Antonio, Texas; and Houston, Texas.

Although no formal local need assessment was done before the MLT Program was initiated in 1972, an informal survey was taken in 1975. At that time, the average number of annual local openings for MLT's was estimated at twenty-five.

V. DISCUSSION AND CONCLUSIONS

The local job market for medical laboratory technicians seems to reflect the national trends cited earlier. Hospitals anticipate expansion but that expansion may not continue to keep pace with the number of qualified applicants. Nevertheless, the Penn Valley program is the only technician program in Kansas City and graduates only about ten technicians per year. The program's placement record has also been good and according to the Occupational Outlook

Handbook growth is anticipated in the technician area.

> The use of automated laboratory test equipment is expected to lead to an increase in the number of medical laboratory technicians and assistants relative to technologists. Through technological advances, technicians and assistants can operate equipment to perform tests which previously required the skill of a technologist (p. 460).

Several laboratory supervisors indicated there was a trend toward employing more technicians in large Eastern and Western hospitals. They were uncertain whether that trend would happen in Kansas City. Current regulations require that technicians work under the direct supervision of a medical technologist. Smaller laboratories, therefore, employ only technologists because they require personnel who can be responsible for the entire operation. A number of the large hospitals in the area conduct training programs for medical technologists. These hospitals also tend to staff their laboratories primarily with technologists because those persons can teach and supervise students. Thus, employment for technicians is primarily available in relatively large hospitals that do not train technologists.

The number of technologists being trained in the area may also influence the number of positions available for technicians. If the supply of technologists becomes too great, they may take jobs normally filled by technicians. Programs in the Kansas City area are currently graduating in excess of 70 technologists per year.

Another factor that could influence the employment of technicians is the proposed revision of the Clinical Laboratories Improvement Act. This legislation should be monitored closely. The revision will likely impose stricter qualifications for technicians and, thus, increase the need for trained individuals.

Overall, the employment prospects for technicians currently appear favorable but the situation should be re-assessed regularly. Changes in any of the factors mentioned above could alter the employment situation. Nevertheless, if Kansas City follows national trends the demand for technicians should increase.

JOB SURVEY FOR MEDICAL RECORD TECHNICIANS
METROPOLITAN KANSAS CITY

The Occupational Outlook Quarterly (Spring 1976) forecasts favorable employment prospects nationally for medical record technicians with at least associate degrees. In order to determine whether the Kansas City market is likewise favorable, the Office of Institutional Research contacted the directors of medical records at 26 area hospitals by telephone. The directors were asked how many medical record technicians they currently employed, how many unfilled vacancies they had, and whether they anticipated any future openings. Information was also sought concerning starting salaries and qualifications required of technicians.

Employment Prospects

The 26 directors contacted employed approximately 129 medical record technicians, had 10 unfilled vacancies and anticipated approximately 47 additional future openings. Thus, current employment prospects for medical record technicians in the Kansas City area appear to be favorable.

Nevertheless, it should be noted that two area programs are training medical record technicians so there could be as many as 40 graduates each year added to the labor market. It is essential, therefore, to continue monitoring the market. Since graduates can find employment in a variety of settings other than hospitals (e.g., doctor's offices, nursing homes, rehabilitation programs, etc.), graduate follow-ups could indicate a healthy future job market for some years.

Qualifications

All the directors felt that an applicant who had successfully completed an associate degree program and passed the accredited record technician examination would be qualified for an entry level medical record technician position. Some

directors indicated that they would prefer applicants with previous experience.

Salary

The average starting salary for an accredited record technician was approximately $3.40 per hour.

Medical Record Transcriptionists

Directors at several hospitals who were contacted early in the survey expressed a "desperate" need for medical transcriptionists. Therefore, it was decided to gather similar information regarding employment prospects for medical transcriptionists from directors contacted later in the survey.

Eighteen directors were questioned regarding medical transcriptionists. One hospital contracted with a transcription service, but the other 17 employed a total of 104 transcriptionists, had 12 unfilled vacancies and anticipated at least 17 future openings. They all felt there was a tremendous demand for trained transcriptionists in the area. The main qualifications they sought in a transcriptionist were fast, accurate typing and a knowledge of medical terminology. In most cases, the entry level salaries paid transcriptionists were similar to those paid medical record technicians. Some hospitals offered incentives whereby competent transcriptionists averaged $6.00 to $8.00 per hour.

Suggestions

An ideal program for medical record technicians would appear to be one that would allow students the option of becoming medical record transcriptionists after completion of one year or medical record technicians after completion of two years. If such a program could be integrated with the medical record administration programs at four year institutions, students would have opportunities for job placement after one year as well as continued professional development.

Office of Institutional Research
April 15, 1977

EMPLOYMENT PROSPECTS FOR MENTAL HEALTH TECHNICIANS
IN METROPOLITAN KANSAS CITY

I. INTRODUCTION

The Rainbow Mental Health Center and Johnson County Community College are planning to offer cooperatively a program for training certified Mental Health Technicians. JCCC was recommended by the Kansas State Board of Nursing as a probable site for such a program. The program would be a three term program for 12 months and contain 940 clock hours of instruction.

Kansas Legislation, effective July 1, 1977, requires all Mental Health Technicians to be certified. Although enforcement may not occur at this time, enforcement will eventually take place and there will probably be little advance warning. Hospitals, nursing homes and state agencies such as the Rainbow Unit will be required to employ only certified individuals when the legislation is enforced. The Rainbow Unit has estimated that 100-125 people would be initially affected by the legislation in the Metropolitan Kansas City area. More than half would be in Johnson County.

National Employment Outlook

The Occupational Outlook Quarterly (Spring, 1976) does not include employment prospects specifically for mental health technicians. However, employment trends for nursing occupations should be related to trends for mental health technicians. Annual national estimated openings are 93,000 for licensed practical nurses, 71,000 for registered nurses and 123,000 for nursing aides, orderlies and attendents. The latest Occupational Outlook

Handbook (1976-77) includes psychiatric aides in the later category. The employment outlook is as follows:

- Employment expected to increase much faster than average for all occupations. Although most openings will arise from replacement needs, many new openings will be in nursing homes, convalescent homes, and other long term care facilities.

Certified mental technicians would have training more comparable to that of a licensed practical nurse. However, the employment opportunities for the aides should be indicative of the opportunities for mental health technicians.

II. SURVEY OF KANSAS CITY AREA NEEDS

Last October, a questionnaire was mailed to eighteen area hospitals, nursing homes and state agencies. The sample was selected by the JCCC nursing coordinator in cooperation with the Rainbow Unit. The intent of the survey was to obtain some basic data concerning the needs of a variety of mental health institutions in the metropolitan area. The results of that survey are summarized below:

Current Employment

Three of the 17 responding agencies currently employ Certified Mental Health Technicians. One of these three agencies has 10 such positions budgeted but only three filled, while a second agency has 50 budgeted and 31 filled. The third agency did not respond to the question.

Five other agencies who do not currently employ Certified Mental Health Technicians said they would employ them if available. One of these five would hire five; a second agency would hire 14; a third agency would hire 9 and the remaining two did not specify the number. Eight other agencies would not hire applicants even if available. The remaining agency did not respond to the question.

Hourly Pay

Four agencies gave their current or anticipated hourly pay rates ($2.55, $2.80, $3.08 and $3.85) while two other agencies did not specify.

Future Employment

Two agencies plan to increase the number of Mental Health Technician positions over the next five years. One of these two agencies was the one which currently has 50 budgeted positions and anticipates another five positions. The second agency did not specify how many more positions would be added. A third agency indicated "perhaps" there would be additional positions. The remaining 14 agencies either responded there would not be additional budgeted positions or else their other answers inferred they did not anticipate additional positions.

Interest In Mental Health Technician Program

Nine agencies had current employees who would be interested in a Mental Health Technician Program. The number of employees ranged from one to 25 for a total of 72 at all nine agencies.

Required Knowledge And Skills

Knowledge and skills in the following six areas were considered "Essential" by more than 50 percent of the agencies:

Basic Patient Care	(73%)
Therapeutic Communication	(73%)
Milieu Management	(64%)
Psychiatric Crisis Skills	(64%)
Admissions and Discharge	(64%)
Record Keeping	(55%)

Some agencies (45%) also considered knowledge about and skill in Psychiatric Intervention as being "Essential". One agency also suggested that staff needed training in the "gentle art of self-defense."

The majority of agencies considered the two areas of Staff Supervision and Administration of Medications as either "Not Important" or "Not Applicable."

III. SUMMARY

Salaries

The salaries currently paid by the four agencies who gave their current salaries ranged from $2.55 to $3.85 per hour. However, there is a state approved salary range for certified mental health technicians. Salaries are comparable to those paid a licensed practical nurse and $4.00 per hour could be expected to be an average beginning salary. As the certification is enforced, salaries undoubtedly will also increase.

Employment Prospects

Two responding agencies who currently employ certified mental health technicians indicated a total of 26 unfilled but budgeted positions. Three other agencies who do not currently employ certified mental health technicians indicated they would hire 28 if such individuals were available. Two agencies plan to increase the number of mental health technicians over the next few years.

The Rainbow Unit itself has a need for about 20 trained individuals each year. It should be noted that the Rainbow Unit was a respondent to the survey. Even so, there appears to be a moderate need for training mental health technicians who can obtain certification. The enforcement of the state legislation would increase the need. Meanwhile, the program planned for 10 students each term should enable placement of all those who become certified and seek employment.

Office of Institutional Research

July 19, 1977

EMPLOYMENT PROSPECTS FOR PHYSICAL THERAPIST ASSISTANTS AND RADIOLOGIC TECHNICIANS

I. INTRODUCTION

Johnson County Community College (JCCC) and Penn Valley Community College (PVCC), one of the Metropolitan Community Colleges, have discussed the possibility of two new cooperative programs, physical therapist assistant and radiologic technology. PVCC is currently offering both programs and would reserve a minimum of five openings in each program for students from JCCC. These students could take a number of the prerequisite courses (e.g., Human Anatomy, Psychology, Communications, etc.) at JCCC before their program laboratory courses at PVCC. JCCC would pay PVCC $50 per credit hour for the laboratory courses. JCCC, of course, would receive the student tuition and state aid reimbursement for each credit hour. The arrangement would be similar to that now in effect for dental assisting and proposed for medical laboratory technology. The proposed agreements would allow JCCC to offer students rather expensive career training opportunities with no additional staff, facilities, or courses and little or no actual cost. From a strict cost point of view, then, these programs appear to be very desirable.

The Office of Institutional Research was asked to provide information concerning the employment prospects for physical therapist assistants and radiologic technologists, so that the College could better evaluate the potential benefits to students of these programs.

II. NATIONAL EMPLOYMENT TRENDS

The United States Department of Labor's Bureau of Labor Statistics (USBLS) forecasts good employment prospects for physical therapist assistants and aides. Employment in 1974 was estimated at 10,500 and an

average of 1,400 openings are expected annually between 1974 and 1985 (Occupational Outlook Handbook in Brief, 1976-77 Edition). The employment in this area is "expected to grow much faster than average for all occupations, resulting in excellent opportunities for both assistants and aides" (p. 25).

Employment of radiologic technologists was estimated to be 82,000 in 1974 with an average of 8,600 openings occurring annually between 1974 and 1985. Nevertheless, the Bureau anticipates strong competition: "Despite faster than average employment growth as X-ray equipment is increasingly used to diagnose and treat diseases, even graduates of AMA-approved programs may face competition for choice positions. Part-time workers will find best opportunities in physicians' offices and clinics" (p. 24).

III. LOCAL EMPLOYMENT TRENDS

Employment projections for the Kansas City Metropolitan area, complied by the USBLS and the Research and Analysis Section of the Missouri Division of Employment Security suggests a somewhat different pattern of employment for this area (Kansas City SMSA Employment Outlook, March 1977, p. 17). The outlook for radiologic technologists and technicians appears favorable whereas physical therapist assistants should face some competition. In the Kansas City Standard Metropolitan Statistical Area, an average of 80 radiologic technology positions are projected to be available annually between 1974 and 1985 compared to 10 for physical therapist assistants. There were 170 projected annual openings for physical therapists, but these positions require a four year degree.

A telephone inquiry to three nearby hospitals by the Office of Institutional Research tended to confirm the projections for the

Metropolitan Kansas City area. The three hospitals employed a total of approximately 67 radiologic technicians (53 full-time and 14 part-time) and two physical therapist assistants. The three hospitals also expected to add or replace about 15 radiologic positions and one physical therapist assistant position during the next year or two. Starting salaries for both types of positions are approximately $8,000 to $10,000 per year.

IV. CONCLUSIONS

Both the physical therapist assistant and radiologic technology programs seem to offer career opportunities for JCCC students. The local market for radiologic technicians appears good but the national outlook is less promising. The situation is reversed for physical therapist assistants. The local job situation is not as favorable for those assistants as is the national outlook. Students in the two-year physical therapist assistants program could transfer to baccalaureate programs since the job outlook for physical therapists is favorable both nationally and locally.

Students entering either of these two career programs should be informed of the somewhat different employment outlook for the national and Metropolitan Kansas City area. Radiologic technicians can expect to find suitable employment locally. Some physical therapist assistants, though, should be prepared for the possibility of moving or continuing their education in a four-year program to become a physical therapist.

Office of Institutional Research

March 20, 1978

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EMPLOYMENT PROSPECTS FOR PRESS OPERATORS IN JOHNSON COUNTY

I. INTRODUCTION

In 1977, Johnson County Community College received planning approval from the Kansas State Department of Education to explore the development of a printing career program designed to train press operators. An important aspect of this planning process is the identification of local needs for such a program. The Director of the Communications and Arts Division requested that the Office of Institutional Research assist in the determination of local needs by surveying printers in Johnson County. The Director of Media Production and the Director of Communications and Arts helped design a telephone survey instrument which was administered by a member of the research staff. The survey was designed primarily to evaluate employment prospects for press operators and employer reactions to the proposed training program. However, a number of other areas were also explored: employment prospects for related occupations, types of presses used, anticipated changes in the printing industry, willingness of companies to offer work-study training opportunities, and suggestions about possible sources the College could contact regarding equipment donations. The actual survey instrument is included as an Appendix to this report.

II. LOCAL OUTLOOK

Representatives of 17 printing firms in Johnson County were contacted. Since this number includes only about half the firms listed in the yellow pages classification and none of the "in-house" publishing operations within the county, the actual number of job openings

for press operators in Johnson County should be higher than that reported here. Nevertheless, it was decided that a 50% sample of actual printing companies in the county should be sufficient to determine the feasibility of the program. Before a program is actually implemented, though, these other firms should be contacted by the program coordinator for more detailed input regarding training needs and possible work-study arrangements.

Employment Prospects for Press Operators

The 17 printing firms represented in the survey employed a total of 56 press operators (three of these were owner/operators). One company employed only web-press operators. The number of operators employed in the other 16 companies ranged from one to nine, with most companies employing two to four. Two companies had current vacancies for press operators and one had a vacancy for a trainee. Turnover among press operators was generally low. All but three of the companies anticipated possible expansion in the number of press operator positions. They expected to add between 23 and 32 such positions. None of the companies required formal education beyond the high school level for press operators, but 13 of the companies felt that graduation from a good two-year training would help applicants get a job with their company. Starting salaries for new press operators generally ranged between $3.00 and $4.50 per hour, with rapid advancement to higher salaries for those who proved capable.

In all the shops contacted, the press operator was responsible for the complete printing operation (e.g., stripping, plate making, cutting, binding, packaging, and routine maintenance of the press). In many small

shops, press operators were also required to meet with customers. The most commonly used presses were the small duplicating presses (e.g., A.B. Dick 360, Multilith, etc.). They were used in 12 companies. Only two companies used letter presses. Five companies used 25 inch or larger presses, two had two-color presses, one a tandem press, and three used web-presses.

Related Occupations

The companies contacted also employed a total of nine phototype setters, 14 cameramen, 15 web-press operators, and five feeders. They anticipated adding only one position in each category.

Anticipated Technological Changes

The most commonly cited changes in technology were increased use of automated equipment and web-presses. The respondents felt that such changes would increase rather than decrease the demand for trained press operators.

Willingness of Employers to Participate in Field Study

Rrepresentatives from 14 of the 17 companies contacted said they would consider providing on-the-job training for students during their second year of the program. Half of these were fairly certain that such arrangements could be made.

III. NATIONAL OUTLOOK

The United States Bureau of Labor Statistics forecasts favorable employment outlooks for press operators and lithographic workers (Occupational Outlook Handbook in Brief, Spring 1976). The Bureau estimated that 140,000 persons were employed as printing press operators and assistants in 1974 and projected an average of 5,600 annual openings between 1974 and 1985. The trend was summarized as follows:

> Despite increased use of faster, more efficient presses, employment expected to increase about as fast as average for all occupations due to growth in volume of printed materials. Particularly good outlook for web-press operators.

Estimates for lithographic workers were 85,000 employed in 1974 and an average of 4,300 openings annually. Prospects for employment in this area were considered good:

> Employment expected to grow faster than average for all occupations as offset presses are increasingly used in place of letter presses. Best prospects for those who have completed post high school programs in printing technology.

Thus, the prospects for the printing profession nationally and locally appear quite favorable.

IV. CONCLUSION

The prospects for placing students from a Printing Technology Program appear quite favorable at this time. Although the survey covered only half of the printing firms in Johnson County, there appeared to be sufficient demand to make the program feasible. The firms contacted did not currently require press operators to have formal training beyond the high school level, but most did feel that such training would give applicatns an advantage. It might not significantly affect their entry level salaries, but should facilitate their advancement.

The program should also be able to locate sufficient sponsors for placing students in field study. Fourteen of the respondents were willing to consider cooperating with the College in such an arrangement. Moreover, the interest shown by the respondents indicates that the proposed Printing Program should be well received by employers.

TELEPHONE JOB MARKET SURVEY FOR PRESS OPERATORS (PRINTING)

Name of Firm: _____

Address: _____ Telephone No.: _____

Phone Record/Notes: _____

_____

_____

Number of press operators currently employed: _____
Current vacancies: _____
Approximate annual turnover: _____
Anticipated expansion (1-2 yrs.): _____

Education required: _____

_____

Would 2-yr. degree help applicant get job? _____ Salary: _____

Source of most operators: _____

_____

Duties: _____

_____

Types of presses used: _____

_____

Do you anticipate any changes in the printing industry within the next 5 years that would affect the employment of press operators or the training they will need?

_____

Would you consider offering on the job training for students during their second year of training: _____

Could you suggest anyone the College might contact about the possibility of getting some printing equipment donated?

_____

_____

_____

Any further comments or suggestions: _____

_____

_____

_____

Do you employ people in any of the following positions:

	Number Employed	Number Vacancies	Expansion	Educational Requirements
Phototype Setters				
Copiers				
Word Processors				
Cameramen				
Small Web Press Operators				
Others				

EMPLOYMENT OUTLOOK FOR URBAN AGRIBUSINESS
JOHNSON COUNTY

JCCC is currently considering a cooperative agreement with Longview Community College by which students may enroll in an urban agribusiness program. Although the Occupational Outlook Handbook (1976-1977) does not include an occupational category directly comparable to this program, several related fields are discussed (e.g., horticulturists, landscape architects, plant scientists, entomologists). Opportunities for employment in all these areas are favorable. "In most of these fields, the demand for workers exceeds the supply." Employment prospects for graduates of the urban agribusiness program may not be exactly the same, since the other occupations require more education. Nevertheless, prospects should be good especially in an area like Kansas City with a strong emphasis on agribusiness.

The "yellow pages" of the Kansas City telephone book provide a good indication of the possibilities in this field. Listings included 77 tree services, 71 lawn maintenance firms, 59 nurseries, 40 sod specialist companies, 36 cemetaries, 19 country clubs, 16 other golf courses, and 7 city park departments.

Johnson County Prospects

In order to gain an impression of the employment opportunities in Johnson County, the Office of Institutional Research contacted 12 potential employers in Johnson County. The sample consisted of two landscape architects, three small nurseries, two full-service nurseries, a florist, a lawn maintenance company, a golf and country club, and two city park departments.

The landscape architects employed only persons with advanced degrees and the small nurseries typically employed only one or two people other than the owner-operators. The other firms, however, seemed to offer considerable employment opportunities. One of the full-service nurseries had a current payroll of 160 persons and the other had 10 to 12 employees during the summer and three on a year-round basis. The florists employed eight persons, the lawn maintenance company employed six, the golf and country club employed eight in the summer and four on a year-round basis. The two city park departments employed 30 and six persons respectively in their maintenance departments. All of these employers except for the country club anticipated staff increases within the next two years. Together they expect to create approximately 15 new positions.

All the employers indicated that they would prefer graduates of the program to persons without formal training or experience. Two said that some of their current employees had been enrolled in such a program.

Summary

The employers contacted represented only a small sample of the potential employers within the area. Therefore, there would appear to be sufficient employment opportunities for graduates. It should be noted, however, that many of the employment prospects are seasonal in nature. For example. summer is a busy season for lawn and tree services but plant stores, nurseries and florists are busier during spring and winter.

Starting Salaries

Starting salaries varied over a wide range from approximately $450 to $905 per month.

Office of Institutional Research

July 22, 1977

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